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ABSTRACT

This monograph examines the issue of school violence and the ways to eliminate it. The goal is to return schools to their status as safe havens for children to learn, achieve, and acquire the skills they need to become successful and productive adults. Section I defines school violence and reviews data on its prevalence. Section II discusses various risk factors for violent behavior among youth. An understanding of risk, particularly within a developmental framework, is essential to forming and implementing effective school-based prevention and intervention programs. The next section examines children's reactions to violence, including the mental health consequences of exposure and victimization, and considers the impact of victimization from a developmental perspective and the special case of bullying at school. Section IV discusses the school itself as a setting that can promote violent and aggressive behavior. This includes a discussion of student diversity, issues of safety and security, and the presence of gangs at school. Section V examines the role of education in understanding what works in violence prevention, and Section VI presents examples of several different types of school-based interventions designed to address youth aggressive and violent behavior. Programs at the elementary, middle, and high school levels are reviewed. The final chapter focuses on what is known about youth violence and the implications of this knowledge for school-based violence prevention and social policy. (Contains 4 tables, 1 figure, and 189 references.) (Author/SLD)

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School Violence: Risk, Preventive Intervention, And Policy

Daniel J. Flannery

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SCHOOL VIOLENCE: RISK, PREVENTIVE INTERVENTION, AND POLICY

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and
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SCHOOL VIOLENCE: RISK, PREVENTIVE INTERVENTION, AND POLICY

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—Daniel J. Flannery

SCHOOL VIOLENCE: RISK, PREVENTIVE INTERVENTION, AND POLICY

Daniel J. Flannery

INTRODUCTION

The incidence of violence in our society has increased steadily over the past decade. For the first time since the 1970s violent acts against strangers occur more frequently than violence between individuals who know each other (Hughes & Hasbrouk, 1996). It makes sense, then, that rates of victimization by violence are also steadily increasing (Finkelhor & Dziuba-Leatherman, 1994). Youth age 10-19 account for a significant portion of the increase in violence perpetration and rates of victimization by violence. Thus, the increase in violence that is occurring in our neighborhoods and communities has not escaped the schools. Schools are no longer the safe havens they once were—places where students were free to develop and learn the skills necessary to have successful, productive lives (Walker & Gresham, 1997). A 1993 study by the National School Board Association (NSBA) found that, of 720 school districts, 82 percent reported an increase in violence over the past five years, across all geographic areas (Glassman, 1993).

Every day there are news stories about children who are victimized by violence at or on the way to school. There are also stories of new attempts by school districts and administrators to "get tough" on school crime by installing metal detectors, arming hallway security guards, requiring uniforms, and conducting random searches of student lockers. School safety has become a priority for parents, students, teachers and school administrators, politicians, and policy

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makers. Creating school environments that are free of violence and drugs is one of the National Education Goals for the year 2000 (U.S. Department of Education, 1993). The recent report by the National Institutes of Health (1994) on aggression and violence concluded that violence is a major public health problem.

The purpose of this monograph is to examine the issue of school violence, and the ways to eliminate it. The goal is to return schools to their status as safe havens for children to learn, achieve, and acquire the skills they need to become successful and productive adults. Section I defines school violence and reviews data on its prevalence. Section II discusses various risk factors for violent behavior among youth. An understanding of risk, particularly within a developmental framework, is essential to forming and implementing effective school-based prevention and intervention programs. The next section examines children's reactions to violence, including the mental health consequences of exposure and victimization, and considers the impact of victimization from a developmental perspective and the special case of bullying at school.

Violence at school cannot be completely attributed to individual child factors, so Section IV discusses the school itself as a setting which can promote aggressive and violent behavior. This includes a consideration of student diversity; issues of safety and school security, including a brief description of some traditional violence prevention approaches; and the presence of gangs at school. Section V examines the role of evaluation in understanding what works in violence prevention, and offers some guidelines for conducting a basic evaluation of school-based violence prevention programs. Section VI presents examples of several different types of school-based interventions designed to address youth aggressive and violent behavior. Programs at the elementary, middle, and high school levels are covered, focusing on established programs with demonstrated outcome effectiveness. The final chapter briefly summarizes what is known about youth violence and the implications of this knowledge for school-based violence prevention and social policy.

I. AN OVERVIEW OF SCHOOL VIOLENCE

The Definition of School Violence

In defining school violence, we need to consider "violence" along a continuum of behavior within a developmental framework. For example, violent behavior for young elementary school children primarily consists of aggressive behaviors such as kicking, hitting, spitting, or name calling. As children grow older, behavior becomes more serious, characterized by bullying, extortion, and physical fighting. Aggressive or violent adolescents may engage in assault against other students and staff, sexual harassment, gang activity, or weapon carrying. The term *school crime* has also been used to define different types of criminal behavior at school, including theft, property offenses, and vandalism (Goldstein, Apter, & Hartoonunian, 1984). Others define school violence as conflict between students and teachers (Curcio & First, 1993; Steinberg, 1991), or as activities that cause suspensions and disciplinary contacts or detentions. Studies of school violence have variously used such terms as aggression, conflict, delinquency, conduct disorders, criminal behavior, antisocial behavior, and violence, among others, to describe this class of problem behaviors. Because aggressive behavior is different from violence and antisocial behavior, here the appropriate terms are used when describing different areas of research.

Considering school violence as behavior that occurs along a continuum from aggression to violence is important because limiting the focus to serious acts of violence does not fully capture the nature and extent of school crime and victimization (Hanke, 1996). While people are disturbed by increasing rates of school-based homicides (Kachur et al., 1996), these occurrences constitute a relatively small proportion of incidents at school compared to property crimes, acts of assault or extortion, and threats of physical harm. Threats may occur frequently at school but may or may not be actually carried out on school grounds. For the majority of students, the important issue may be less one of violent personal attack and more one of stolen property and threats that color their perceptions and induce anxiety and fear while in school (Hanke, 1996). Of course, witnessing acts of violence, in addition to being personally victimized by violence, can also cause

students to be fearful and anxious, affect a student's willingness to attend school, and impact on a child's ability to learn and be socialized at school.

Finally, the consideration of school violence along a developmental continuum permits an examination of how different forms of violence exposure and victimization affect children at various ages, grades, and different developmental levels, and those challenged to perform various developmental tasks. These issues are essential to consider for implementation and evaluation of school-based prevention programs.

The Prevalence of School Violence

Concern about school violence, crime, and victimization has permeated the education system since the 1950s (Asmussen, 1992). The problem of violence at school persisted and increased to the point that in 1974 Congress mandated a national survey of the prevalence of school crime, the factors associated with its perpetration, and the effectiveness of existing measures to ameliorate student victimization. This mandate resulted in the Safe Schools Study (National Institute of Education [NIE], 1986), which revealed some disturbing trends in the nation's schools.

The NIE report revealed that while teenagers spend up to one-fourth of their waking hours at school, 40 percent of the robberies and 36 percent of personal attacks against them occurred at school (Rapp, Carrington, & Nicholson, 1986). The survey also illustrated the significant emotional, economic, and social costs of school violence. Junior high students were victimized by other students at higher rates than high school students, and a third of junior high students in large cities said they avoided certain places at school like the rest room because they feared being victimized by a peer. Increasing numbers of students reported staying home from school because they feared for their safety. More than 100,000 teachers said they were threatened with physical harm, and over 5,000 teachers reported being physically attacked each month, with these attacks much more likely to result in injury for teachers compared to assaults between students (Hanke, 1996).

The report also documented the significant economic costs of school crime

and violence, estimated to be $200 million annually. Burglaries were reported to occur five times more often in schools than in businesses, with the average cost of each theft about $150. Incidents of vandalism were also higher than expected, occurring an average of one time per month in a quarter of the schools surveyed. Rubel (1977) concluded that from 1950 to 1975 misbehavior in the school setting had shifted from acts of violence against property to violence against persons, and fights had shifted from words to weapons, with sometimes lethal outcomes.

The results of this early survey were somewhat unexpected, and they spurred continued interest in the nature and extent of school crime and violence, their impact on students and school staff, and their economic and social costs. Of particular concern was the consequence of violence and victimization for students, who reported high levels of fear and concern about their safety and security. These concerns prompted several efforts to combat school crime, and prompted the National Crime Victimization Survey (NCVS) to begin to include questions about school-related victimization in its annual survey.

The first NCVS that contained school-related victimization items examined the period from 1974 to 1981 (Toby, Smith, & Smith, 1986). The data showed that, contrary to the popular notion that school crime and victimization were rapidly increasing, levels had remained fairly constant over the five years examined. The NCVS did document that over half of criminal incidents for victims age 14-17 occurred at school. A significant number of youth were victimized by robberies, aggravated and simple assaults, and larceny at school (Toby et al., 1986). Contrary to the Safe Schools study, the NCVS found that 40-50 percent of victimizations perpetrated in schools were committed by strangers.

These findings led to the creation of a School Crime Supplement to the NCVS. This survey of over 10,000 youth age 12-19 who attended school in the first six months of the 1988-89 school year showed that 9 percent of students had been victims of crime in or around school: 7 percent reported at least one property crime and 2 percent a violent crime (Bastian & Taylor, 1991). Students over the age of 17 were less likely to be victims of crime than younger students, with ninth graders the most likely to be victimized and twelfth graders least likely to be

victimized compared to students in other grades. In addition, the survey elicited that 18 percent of students "sometimes" feared being the victim of an attack, with younger students more likely to fear an attack than older students; 16 percent of students reported that a teacher had been threatened or attacked at their school; 15 percent of respondents reported gangs in their school, 6 percent reported they avoided some place in their school because they feared attack, and 2 percent said they had taken a weapon to school to protect themselves (Bastian & Taylor, 1991). Rates of reported victimization by a property or violent crime were only slightly higher for students from urban schools than those from rural schools.

The National Adolescent Student Health Survey (American School Health Association [ASHA], 1989) of over 11,000 eighth and tenth grade students showed that nearly 40 percent of students had been in a physical fight at school (or on the bus to or from school) in the past year, 34 percent reported that someone had threatened to hurt them at school, and 13 percent reported being attacked at school. The fear of victimization was significant: 22 percent of students reported carrying a knife or some other weapon such as a gun to school in the past year. Analyses of the 1993 National Household Education Survey are consistent with these trends, showing that half of students in grades 6-12 personally witnessed some type of crime or victimization at school, and about 1 in 8 reported being directly victimized at school (Nolin, Davies, & Chandler, 1996). Surveys consistently show that the number one reason students carry a weapon to school is for protection rather than with the intent to perpetrate harm on someone else (Sheley & Wright, 1993).

The recent Youth Risk Behavior Survey by the Centers for Disease Control and Prevention in Atlanta (CDC, 1995) is also consistent with the ASHA survey. The CDC found that nearly 1 of every 20 high school students (4.4 percent) said they missed at least one school day because they did not feel safe at or on the way to school. Younger, rather than older, students were more likely to miss a day because of fear for their safety. Nearly 12 percent (18 percent of boys and 5 percent of girls) reported carrying a weapon to school at least once during the 30 days preceding the survey, and 7 percent said they had been threatened or injured with a weapon at school in the past year. Sixteen percent said they had been in a physical fight in the past year, and nearly one-third said they had property (e.g., books,

clothing, or a vehicle) deliberately damaged or stolen at school in the past year (CDC, 1995).

As the NCVS survey results suggested, school violence is not a uniquely urban problem. A National League of Cities study (1994) found that 38 percent of 700 responding cities reported noticeable increases in violence in their schools over the previous five years, and only 11 percent reported that school violence was not a problem in their communities. Nearly two-thirds of the cities who responded had fewer than 50,000 residents and nearly half were suburbs. While the overall level of violence at school was highest for urban districts, nearly one-third of respondents in all types of jurisdictions (e.g., central city, suburb, non-metro, or rural) reported increases in school violence.

Results from a recent National School Board Association survey (NSBA, 1993) showed that more than 80 percent of school districts reported in 1993 that school violence had gotten worse compared to the previous five years. The most frequently reported form of school violence was assault, occurring in 78 percent of the responding districts. Schools also reported an increase in the number of students bringing weapons to schools (61 percent), incidents of student assaults on teachers (28 percent), shootings or knifings (13 percent), drive-by shootings (9 percent), and on-campus rapes (7 percent). Again, problems were not limited to urban school districts, but occurred with increasing frequency over the past five years in suburban and rural schools as well (Rossman & Morley, 1996).

Smaller regional studies of specific groups of students show similarly high rates of violence perpetration and victimization at school. Cotten and colleagues (Cotten, Resnick, Browne, Martin, McCarraher, & Woods, 1994), in a survey of two middle schools in a predominantly African American neighborhood, found that 37 percent of students had been involved in a physical fight at school, 19 percent reported carrying a weapon to school, and 18 percent had been suspended for fighting. Singer, Anglin, Song, & Lunghofer (1995), in one of the largest studies to date of context specific violence exposure and related psychological trauma (N= 3,700), reported that 41 percent of male high school students and 27 percent of females had been hit, slapped, or punched at school in the past year, and over three-

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fourths of students had witnessed someone else being threatened, slapped, hit, or punched. For some categories of victimization and exposure, rates were higher for adolescents in a small city than for adolescents in the central city (see Table 1).

In a subsequent survey of elementary school students, Singer, Miller, Slovak, and Frierson (1997) also found high rates of victimization by violence and exposure to violence. In the central city sample, 44 percent of males and 35 percent of females reported being threatened at school in the past year. Somewhat surprisingly, the rate for many types of victimization was higher in both the small city and rural samples than in the central city sample. While 41 percent of inner-city males reported being slapped, hit, or punched at school, approximately 50 percent of rural males reported having been hit at school. Rates of being beaten up at school were similar for males across central city, small city, and rural samples, but twice as many central city females in grades 3-8 reported being beaten up at school compared to females who lived in a small city or rural area (see Table 1).

Consistent with other national surveys, Singer et al. (1997) showed that younger students are victimized at school at higher rates than older students. The findings are not altogether consistent with what might be expected, however. Table 2 shows that elementary school students consistently reported being beaten up at school more often than middle school students. For boys, however, elementary student males in the rural sample reported the highest rates of being beaten up at school: 24 percent for rural males in elementary school compared to 18 percent for males in central city elementary schools and 20 percent for males in small city elementary schools. Conversely, females in urban elementary schools reported the highest rates of getting beaten at school (12 percent), compared to females in rural (9 percent), and small city (8 percent) elementary schools. Rates of victimization declined steadily from elementary to high school.

Along the continuum of violence perpetration and victimization, homicide is the rarest but most severe form of violence (Finkelhor & Dziuba-Leatherman, 1994). Kachur et al. (1996) used police and news reports, medical examiners' records, and interviews with police and school personnel to conduct one of the

Table 1
Percent of Students Reporting Exposure to Violence and Victimization at School

Grades 3-8

Incident Reported	Males			Females		
	Small City	Rural	Urban	Small City	Rural	Urban
Yourself beaten	13.8	14.1	14.7	5.5	4.7	10.3
Witness to beating of someone else	67.9	62.2	78.0	67.6	55.1	75.7
Yourself slapped	44.1	50.7	41.7	25.4	29.0	34.4
Witness to slapping of someone else	78.7	74.2	80.8	74.0	65.6	77.2
Yourself threatened	54.5	46.0	43.9	39.7	35.5	34.8
Witness to threatening of someone else	81.0	68.3	72.9	80.3	64.8	68.7

Grades 9-12

Incident Reported	Males		Females	
	Small City	Urban	Small City	Urban
Yourself beaten	5.6	9.8	4.0	4.4
Witness to beating of someone else	81.7	75.8	82.0	73.9
Yourself slapped	38.0	36.8	17.8	24.9
Witness to slapping of someone else	93.2	89.0	93.3	87.3
Yourself threatened	48.4	38.7	38.9	34.6
Witness to threatening of someone else	89.2	83.1	87.6	81.0

Note: Subjects reported the incidents above as occurring "sometimes."

Source: Singer, Anglin, Song, & Lunghofer (1995).

Table 2
Percent of Students Who Report Being Beaten Up At Home, in School, and in the Neighborhood

Location	Elementary School (grades 3-5)			Middle School (grades 6-8)			High School (grades 9-12)	
	Rural	Small City	Urban	Rural	Small City	Urban	Small City	Urban
Males								
School	23.9	19.7	17.6	8.3	9.6	11.3	5.4	9.8
Home	20.9	26.3	24.5	12.2	12.1	7.2	6.4	6.7
Neighborhood	18.2	27.8	20.9	7.2	8.0	13.4	11.5	16.4
Females								
School	8.9	7.6	12.4	1.4	4.3	8.9	4.0	4.4
Home	16.8	15.8	17.9	6.3	8.7	9.6	9.1	9.2
Neighborhood	4.4	17.2	12.7	1.4	2.2	10.0	3.8	7.0

Note: Percentage reflects students who report being beaten up at least "sometimes" in the past year.

Sources: Elementary school data: Singer, Miller, Slovak, & Frierson (1997).
High school data: Singer, Anglin, Song, & Lunghofer (1995).

largest nationwide studies of school-associated violent deaths to date. Examining violent deaths associated with schools in the U.S. that occurred from 1992 to 1994, they identified 105 that were school-associated. Homicide was the most common cause of death (N=85), with firearms responsible for all but four of the deaths; suicides made up the remainder of the cases.

Most of the victims were students (N=76), and both victims and offenders tended to be young (below age 20) and male (83 percent of victims and 97 percent of offenders). An equal number of deaths occurred inside school buildings (30 percent), outdoors but on school property (35 percent), and at off-campus locations while the victim was in transit to or from school (35 percent). Equal numbers of deaths occurred during classes or other school activities (44 percent) and before or after official school activities (44 percent). The predominant motives for the deaths were interpersonal disputes (33 percent) and gang-related activities (31 percent), followed by random victim incidences (18 percent) and suicides (18 percent). The remaining motives were romantic disputes (11 percent), robbery (9 percent), disputes over money or property (7 percent), drug-related activities (6 percent), and unintentional (5 percent) (Kachur et al., 1996).

The factors associated with these deaths were similar to homicides and suicides that occurred off school grounds, suggesting that when high levels of violent behavior exist among young people in a community, some of that violence will be played out in and around schools (Sheley, McGee, & Wright, 1992). For example, several of the victims and offenders in Sheley et al.'s study had criminal histories, had been gang members, or had used alcohol or other drugs on a regular basis, and most of the deaths involved the use of firearms. Further, interpersonal disputes constituted the most frequently identified motive for school-associated violent death. This suggests that improving the ability of young people to identify and peacefully resolve interpersonal conflict might be a reasonable approach to reducing the risk of fatal violence in the school setting. Also, any approach to reducing school-associated violence must include a consideration of the larger community context (U.S. General Accounting Office, 1995).

In sum, data from regional and nationally representative samples of students

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and school staff indicate that violence perpetration and victimization rates at school are high, with younger students more likely to be victimized than older students. Rates also depend on the ethnic/racial context, with children who are in the minority group in a school (a white child in a predominantly black school or a black child in a predominantly white school) victimized more frequently than other children (Nolin, Davis, & Chandler, 1996). Thus, it is necessary to take into account the nature and frequency of the type of victimization by violence when addressing the prevalence and seriousness of the problem of school violence (Hanke, 1996). High levels of violence perpetration and victimization are not confined to urban schools; increasingly, they also characterize suburban and rural schools. Knowledge about the prevalence and seriousness of school violence and crime provides a framework for the following discussion of how school violence affects the mental health and behavior of students within a developmental framework.

II: RISK FACTORS FOR AGGRESSION AND VIOLENCE

To understand risk for violence along a developmental continuum, and to provide a framework for school-based prevention and intervention efforts, it is essential to understand risk factors for aggression and violence. It is also essential to understand the *protective factors* that schools can foster or provide to reduce a child's risk of engaging in or being victimized by violence. The American Psychological Association (APA, 1993) recently concluded that the preponderance of evidence suggests that violence is learned behavior. This does not mean that physiological or temperamental factors are unrelated to the manifestation of aggressive or violent behavior (for about 3-5 percent of the population of the most aggressive, antisocial individuals [Tolan & Guerra, 1994]), but that, for most individuals, violence is learned behavior. This has tremendous implications for understanding risk factors and related attempts at prevention and intervention.

Children at risk for aggression and violence are cognitively, imitatively, and socially different from their more socially competent peers (Embry, Flannery, Vazsonyi, Powell, & Atha, 1996). Recognizing violent behavior as a complex phenomenon that is manifested in many different ways, the focus here is on providing an overview of several general areas of risk to help explain the nature of aggression and violence and to inform the development and implementation of school-based violence prevention strategies. The list is not meant to be exhaustive. The six categories of risk are (1) temperament and perinatal risk, (2) cognitive abilities and factors influencing school achievement, (3) the stability and early onset of aggressive behavior, (4) family factors, (5) exposure to violence and victimization by violence, and (6) the influence of media on aggressive and violent behavior. Several excellent reviews examine risk factors for aggression and violence (Earls, 1994; Elliott, 1994; Farrington, 1991; Fraser, 1996; Loeber, 1990; Reiss & Roth, 1993; Yoshikawa, 1994).

Perinatal Risk and Temperament

The literature in this area is limited, mostly due to the necessity to track children over a long period of time to determine whether perinatal risk factors are

associated with delinquency and violence later in life. However, several studies have demonstrated an association between prenatal risk factors and violent behavior. Raine, Brennan, & Mednick (1994), in a large retrospective study of over 4,000 children, showed that birth complications (e.g., breech delivery, preeclampsia, oxygen deprivation due to long delivery duration) were related to violent criminal acts at age 18, but only in combination with ratings of maternal rejection at one year of age. This finding is consistent with the seminal work of Werner (1994) who noted two trends as she followed a large cohort of children from birth to adulthood: (1) the impact of perinatal risk and stress on functioning diminished over time, and (2) the developmental outcome of virtually every biological risk condition was dependent on the quality of the rearing environment. Other studies have demonstrated the association between low birth weight, number of delivery complications, and birth trauma with later conduct problems (Cohen, Velez, Brook, & Smith, 1989) and violent behavior (Kandel & Mednick, 1991; Raine et al., 1994).

Researchers hypothesize that birth complications can result in brain dysfunction and associated neurological and neuropsychological deficits that directly and indirectly predispose an individual to violent behavior (Moffitt, 1990). Birth complications, for example, could lead to cognitive deficits which lead to school failure, occupational failure, and, ultimately, engagement in violent behavior. Similarly, birth complications may contribute to neuropsychiatric deficits and lack of self-control, resulting in explosive, impulsive aggression. The effects of any such brain dysfunction may in turn be exacerbated by a negative early psychosocial environment.

There also exists a relationship between aggressive and violent behavior and childhood impulsivity and child temperament (Brier, 1995). A "difficult" temperament is associated with school failure and delinquency. A temperament characterized by high activity levels, inflexibility, difficulty with transitions, and easy frustration and distraction usually will render a child more noncompliant, out of control, and impulsive. Some such children will meet the diagnostic criteria for disorders such as Attention Deficit Hyperactivity Disorder (ADHD), or Oppositional Defiant Disorder (ODD). There exists a significant relationship

between ADHD and ODD and risk for delinquency and violence (Moffitt, 1990). Young children who suffer from a combination of a mood disorder (e.g., major depression, bipolar disorder), conduct disorder, and associated ADHD, are also at particularly high risk for criminal offending, school failure, and incarceration as adolescents and young adults (Farrington, 1991; Loeber, 1982).

Intelligence, School Achievement, and Social Judgment

Many studies have documented the importance of limited intelligence and school achievement as risk factors for child aggression and violence (Hirschi & Hindelang, 1977). For example, longitudinal research has demonstrated the relationship between low verbal intelligence, such as poor problem-solving skills and poor social skills (Moffitt, 1993), and risk for aggression and violence (Eron & Huesmann, 1993). This association held even after controlling for the influence of poverty, and was stable from age 8 to 30. In general, studies show that IQ scores for delinquent youth are about 8 points lower than the general population, regardless of the individual's race, family size, or economic status (Rowe, 1994). Recidivism rates, or the likelihood that a youngster will commit a crime again in the future, is also related to IQ. In one study, 20 percent of youngsters with IQs below 90 were rearrested compared to only 9 percent of youngsters in the 91 to 98 IQ range (West & Farrington, 1973).

Low verbal IQ is also related to poor school achievement. Children who do not do well in school are more likely to be truant or to stop attending altogether (Cairns, Cairns, & Neckerman, 1989). Even in early adolescence lack of attachment to school is related to delinquent behavior (Vazsonyi & Flannery, in press). When they are not attending school, these youth are usually hanging out with other kids who are also truant or who have dropped out of school. These deviant groups, made up of youth who have been actively rejected by their peers, provide a setting where the opportunity for engaging in delinquent and violent behavior is significantly greater than it would be if a youngster were attached to school and attending it on a regular basis (Patterson, Reid, & Dishion, 1992). Patterson and his colleagues highlight the combination "failure" of peer group relations and academic skills which contributes to an "early starter" model of delinquency.

Another problem for aggressive, delinquent, or violent youth is their tendency to make cognitive misattributions and to have impaired social judgment (Dodge, Bachorowski, & Newman, 1990; Lochman & Dodge, 1994). Aggressive preadolescents, relative to average peers, have been found to attend to fewer relevant interpersonal cues before interpreting the meaning of others' behavior; to be more likely to attribute others' behavior to hostile intentions; to report lower levels of fear and sadness and higher levels of anger when labeling their responses to various interpersonal situations; and to be more likely to expect that aggressive solutions will successfully reduce aversive behavior from others and will gain tangible rewards (DuRant, Treiber, Goodman, & Woods, 1996; Lochman & Dodge, 1994).

Specifically, aggressive and violent adolescents are more likely to label neutral cues in their environment as hostile, thus increasing the likelihood that they will react aggressively to a particular situation (Graham & Hudley, 1992). For example, consider two seventh grade boys walking down a crowded and noisy hallway at school between classes. One boy is a high-achieving student who regularly attends school and is rarely a behavior problem. The other has a history of being truant, of doing poorly in school, and of engaging in disruptive and delinquent behavior. The two boys bump into each other. In this scenario, the second boy stops and accuses the first boy of bumping into him on purpose. Rather than brushing the incident off as an accident, the second boy has immediately (perhaps impulsively) assumed that the first boy must have intended him ill will and is reacting aggressively and forcefully. He has misinterpreted an ambiguous, neutral event as something with hostile intent. His misattribution leads him to react aggressively and to escalate the accidental bump into a conflict. Further, the second boy may lack the problem-solving, perspective-taking, and conflict resolution skills to adequately resolve this quickly escalating dispute (Dishion, Loeber, Stouthamer-Loeber, & Patterson, 1984). All of these social-cognitive factors, fueled by the initial misattribution of hostile intent, increase the risk that aggressive, violent behavior will occur in this situation.

Finally, rejected children have been shown to be more likely to escalate

aggression when they are the target of aggressive acts such as teasing or taunting. They are quick to fight and slow to employ negotiation, bargaining, and other forms of problem solving. For both boys and girls such a behavior pattern results in further rejection by peers. This cycle of rejection has the effect of limiting a child's opportunities to learn from socially skilled peer groups and increases the risk of subsequent problems in school and the community (Coie, Lochman, Terry, & Hymna, 1992).

Early Onset and Stability of Aggressive Behavior

One of the most consistent findings in the risk factor literature is that it is possible to predict with a high degree of accuracy which children will be aggressive and violent in adolescence by their behavior in kindergarten and first grade (Farrington, 1991; Huesmann, Eron, & Yarmel, 1987; Loeber & Hay, 1994). Ensminger, Kellam, & Rubin (1983) showed that, for boys, aggressive behavior as rated by their first grade teacher was a significant predictor of self-reported delinquency in adolescence. Spivak (1983) found similar results for both boys and girls, although the relationship was also due to poor school achievement. In some of the earliest work in this area, Robins (1966) showed how early onset aggression, particularly before age 8, was associated with higher rates and severity of adolescent and adult antisocial behavior. The more serious, and the greater the variety and frequency of early aggressive behavior, the greater the risk of antisocial and criminal behavior continuing into later adolescence and adulthood (Blumstein, 1995). Generally researchers agree that early conduct problems in kindergarten and first grade lead to poor school achievement in later grades which, in turn, leads to delinquency in adolescence (Hawkins, Van Cleve, & Catalano, 1991; Hawkins et al., 1992; Tremblay et al., 1992).

Other longitudinal work illustrates the tremendous stability of aggressive behavior (Eron & Huesmann, 1993). While not all children who are identified as aggressive in elementary school grow up to become delinquent adolescents and violent adults, the majority of delinquent adolescents and violent adults retrospectively would have been able to be identified early in childhood as having significant behavior problems (Tolan et al., 1995). According to Patterson and

Bank (1986), the single best predictor of adolescent criminal behavior is a long-established pattern of early school antisocial behavior. Highly aggressive antisocial behavior is nearly as stable over a decade as IQ, with correlations of approximately 0.60 (Quay & Wherry, 1986).

Walker has also demonstrated the relationship over time between early adolescent school behavior and likelihood of arrest. By the seventh grade, 21 of the 40 most seriously antisocial boys in one sample had been arrested 68 times for criminal behavior, while only three boys in the control group had been arrested, and each only one time (Walker & Sylwester, 1991). Further, the fifth grade behavior of the very antisocial group was highly predictive of group members' rearrest status up to 5 years later, and their general behavior pattern tended to get worse as they progressed through school.

The longitudinal data collected by Walker is impressive in that he was able to predict the arrest record of nearly 80 percent of the boys who had been arrested by using three simple measures: (1) teacher ratings of social skills, (2) total negative playground behavior of the boy and his playmates, and (3) discipline contacts with the principal's office (Walker & Sylwester, 1991). Teachers are important identifiers of children at risk for aggression and violence because they occupy a unique front-line position to identify aggressive children, even in the first years of school. Most teachers interact daily and over several years with many children of a particular age or grade, giving them a keen sense of what is developmentally appropriate and expected behavior. Thus, teachers often have insight into a child's behavior on a daily basis which is not available to parents or others involved in a child's life. When a teacher notices a child engaging in frequent, intense aggressive behavior that is persisting over time, the school should intervene immediately with that child.

The phenomenon of early onset problem behavior and its stability and chronicity illustrate the importance of early prevention and intervention, especially given the complex interplay of factors that become more difficult to ameliorate as children get older, such as ongoing school failure, peer rejection, persistent conflicts with teachers, and affiliation with other at-risk peers (Constantino, 1995). The

window of opportunity for effective prevention and intervention diminishes as children mature.

Family Factors

If violence is learned behavior (APA, 1993) then children can also be taught prosocial competence. Children are socialized from a very young age about how to handle frustration, how to react to limits and consequences, and how to solve problems effectively and resolve disputes. Most of this socialization first occurs at home and in the family. The evidence is clear: parents of aggressive children punish more frequently, but inconsistently and ineffectively. They also tend to negatively reinforce coercive and manipulative child behavior and fail to adequately reinforce positive, prosocial behavior. A coercive style of parent-child interaction can develop wherein parents reinforce coercive child behavior and are inadvertently negatively reinforced themselves—by giving in to their coercive child, they are rewarded when the child stops yelling or trying to manipulate them. Children learn that aggressive behavior often leads to parents' giving them what they want. By reacting to a parental request with an aggressive response that is modeled on parental problem solving, the child escapes punishment, controls the social exchange, and continues desired behaviors (Patterson, 1995). One risk is that this learned style of interaction may generalize for the child from home to school, where it becomes part of a child's social repertoire with peers and teachers (Fraser, 1996). If a child learns from parents to respond to authority with aggression and manipulation, he or she will have difficulty interacting successfully in a school environment where other adults and authority figures make daily requests of the child. Their interaction style becomes confrontational, oppositional, and potentially violent.

Parents who are harsh, rejecting, and neglecting also have children at higher risk for engaging in aggressive, violent behavior (Earls, 1994; Fraser, 1996; Patterson, DeBaryshe, & Ramsey, 1989; Patterson & Yoerger, 1993). Parental harshness has been found to increase the risk of delinquency, possibly by increasing child resentment and defiance, which is then expressed through truancy, poor school performance, and antisocial behavior.

Parents who monitor their children effectively and who are more actively involved in their children's school activities are more likely to have socially competent children. Parents who know where their children are, and who they are with, are more likely to have clear expectations and boundaries concerning their child's friends and activities, and to impose consequences when those expectations are violated or the boundaries exceeded.

Children who have antisocial parents are also at increased risk for delinquency and violence. Part of the risk related to parent criminal behavior may be related to inherited temperament or other genetic influences (Rowe, 1994). Part of the influence of antisocial parents may also be reflected in inconsistent or neglectful parenting practices, in the modeling of antisocial behavior, and in inadequate socialization of their children.

Finally, children who are victims of maltreatment and abuse at home during childhood are at significantly higher risk for being violent in adolescence than their non-maltreated peers. In Thornberry's study (1994), 38 percent of youth from nonviolent families reported involvement in delinquency in adolescence. The rate increased to 60 percent for youth whose family engaged in one form of violence (partner violence, family climate of hostility, or child maltreatment) and to 78 percent for adolescents exposed to all three forms of violence. Exposure to multiple forms of family violence, therefore, doubled the risk of self-reported youth violence. Thornberry's results highlight the significant influence of child exposure to violence and victimization by violence as risk factors for subsequent perpetration of violence. Exposure to violence and victimization by violence at home also contribute to child risk for perpetration of violence at school (Flannery, Singer, Williams, & Castro, 1997), and can contribute to poor child outcomes at school like poor achievement.

Exposure to Violence and Victimization

Children and adolescents are being exposed to more frequent and more intense levels of violence at school. In one recently completed study, three of four adolescents reported having witnessed someone else being threatened, slapped, hit,

adolescents reported witnessing a shooting in the past year (Singer et al., 1995). In New Orleans, 90 percent of school-aged children reported witnessing violence, with 70 percent indicating that they had seen a weapon used and 40 percent saying they had seen a dead body (Osofsky, Wewers, Hann, & Fick, 1993). Even very young children are exposed to high levels of violence. In a survey of families referred to a pediatric outpatient clinic, Taylor, Zuckerman, Haik, and Groves (1994) found that 1 of every 10 children under age 6 had witnessed a knifing or shooting, and almost half had heard gunshots. In Tucson, 17 percent of third graders reported that in the past week someone had tried to hurt them with a gun or knife, and nearly half of all third to fifth graders reported witnessing gang activity at school (Embry et al., 1996). The American Psychological Association's Commission on Violence and Youth (1993) reported that 45 percent of first and second graders in Washington, DC, said they had witnessed a mugging, 31 percent had witnessed shootings, and 39 percent had seen dead bodies.

Evidence is quickly mounting that exposure to violence and particularly victimization by violence are associated with increased risk of perpetrating violence (Widom, 1991; Thornberry, 1994). For example, Rivara, Shepherd, Farrington, Richman, and Cannon (1995) showed that adolescents victimized by assault were more likely to have a history of criminal activity or to develop criminal behavior subsequent to their assault. In a recent study of urban black adolescents, previous victimization by violence and corporal punishment was associated with self-reported use of violence (DuRant, Cadenhead, Pendergrast, Slavins, & Linder, 1994). Widom (1989) found that abused or neglected youth were 38 percent more likely to be arrested for a violent crime by the time they were adults, compared to children who had not been mistreated. Singer et al. (1997) showed that even after controlling for the effects of demographic variables, parental monitoring, and watching aggressive television, recent violence exposure was the most significant predictor of self-reported violent behavior among third to eighth grade students, uniquely accounting for 24 percent of the overall variance. Farrell and Bruce (1997) also recently showed that exposure to community violence for urban sixth graders was related to their self-reported violent behavior, although they did not find increases over time in the frequency of violent behavior related to violence exposure.

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The Influence of the Media

It is estimated that by the time a child reaches the age of 18 he or she will have witnessed over 200,000 acts of television violence, including 33,000 murders (APA, 1993). Violent acts, defined as acts intended to injure or harm others, appear approximately 8 to 12 times an hour on prime time television and about 20 times an hour on children's programming (Sege & Dietz, 1994). A recent comprehensive review of the extent of violence on commercial and public television indicates that 67 percent of children's programs portray violence in a humorous context. Further, only 5 percent of the violent acts on children's programs show any long-term, negative consequences of the violence (Mediascope, 1996). The levels of physical violence depicted in Saturday morning cartoons have long been the topic of public debate. No doubt, children and adolescents are exposed to frequent and intense levels of violence on television, in the movies (e.g., *Terminator*), on MTV (particularly some forms of hardcore rap music), through video games (e.g., *Mortal Kombat*), every morning in the newspaper, and nightly on the evening news. Does this chronic exposure to violence in the media impact children? For years this question was hotly debated, but several recent large-scale studies have concluded that exposure to media violence is strongly associated with a child's risk for engaging in aggressive and sometimes violent behavior (APA, 1993; Derksen & Strasburger, 1996; Eron, Gentry, & Schlegel, 1993; Gerbner & Signorielli, 1990).

There appear to be three main effects of violence in the media. First, children who are exposed to high levels of media violence are more accepting of aggressive attitudes and, after watching violence, behave more aggressively with peers (Centerwall, 1992; Huesmann, 1986). Just watch any elementary school playground to see the number of children acting out *Power Rangers* or *Mutant Ninja Turtle* stunts. Second, more chronic and long-term exposure to violence can lead to desensitization to violence and its consequences. Rarely are youth exposed to the consequences of a shooting, violent explosion, car crash, or fall off a cliff (not that we would want them to see all of this). Third, children who watch a lot of violence on television seem to develop a "mean world syndrome." In other words, viewing violence increases children's fear of becoming a victim of violence because they come to view the world as a mean and dangerous place, which increases their

felt need to protect themselves and to be mistrustful of others. Younger children may also have particular difficulty distinguishing fantasy from reality and may not be able to differentiate science fiction from their everyday experiences. In general, violence on television occurs frequently, and is typically inconsequential, effective, and rewarded. It is practiced as often by the heroes as by the villains. Violence ends confrontations quickly and effectively, without the need for patience, negotiation, or compromise (Sege & Dietz, 1994).

Surely not every child who watches lots of violence on TV grows up to be an aggressive teenager or adult, but those youth judged to be somewhat more aggressive at a very early age become significantly more aggressive after viewing violence in the media. Conversely, children who consume a large prosocial diet of programs like *Sesame Street* or *Mister Rogers* are less aggressive, more cooperative, and more willing to share with other children. Media, in all forms, but particularly television, exert a powerful influence on child aggressive and prosocial tendencies and behaviors. This has been shown in laboratory studies, in field studies, in general reviews of many studies, and, in one Canadian community, before and after the introduction of television to an entire community (Derksen & Strasberger, 1996; Murray, 1997).

Singer (1997) recently asked elementary school students about their television viewing habits and preferences in relation to their experience of post-traumatic stress disorder (PTSD) symptoms and violent behavior. He found that 44 percent of males reported their favorite TV consisted of "shows that have lots of action and fighting" followed by 33 percent of boys who said "shows that are funny" were their favorite. Only 9 percent of girls, on the other hand, said they preferred shows with lots of action and fighting, while nearly 40 percent of girls said their favorite shows were those that were funny, followed by music videos (29 percent). Similar to the findings for exposure to violence, both boys and girls who reported watching more than 6 hours of TV per day reported significantly higher levels of clinically significant PTSD symptoms than children who said they watched less than 6 hours of TV a day.

Other Negative Social Influences

While these influences are not discussed here separately and in detail, there is much work linking adolescent violence to neighborhood factors such as levels of disorganization, high mobility rates, a scarcity of adults to monitor children's behavior, and high neighborhood levels of drug and gang activity (Sampson, Raudenbush, & Earls, 1997; Coulton, Korbin, & Su, in press). A significant literature also exists on the association between poverty and economic deprivation and youth violence (Guerra, Huesmann, Tolin, Acker, & Eron, 1995). These problems are important to consider with respect to school violence in that schools are part of the neighborhood and community context where children live. There exists a significant relationship between the amount of violence in a neighborhood and the level of violence that children report at school (Ascher, 1994; Hellman & Beaton, 1986; Menacker, Weldon, & Hurwitz, 1990). Most children are exposed to and victimized by the highest rates of violence at or on the way to school. While the role of accessibility of firearms as a risk factor for violence is not discussed here (see Rushforth & Flannery, in press), many school safety measures are aimed at keeping firearms and other lethal weapons off school grounds. It is somewhat distressing that over 80 percent of the firearms children bring to school are gotten from home (Walker & Gresham, 1997).

The risk factors related to violent behavior are complex and multifaceted, and may change over time. They also do not operate independently, but interact in complex ways to result in the subsequent perpetration of acts of violence. For example, the literature on perinatal risk consistently demonstrates the relationship between risk and poor outcomes only when they are combined with the effects of chronic poverty, family discord, parental mental illness, or other persistently poor child rearing conditions like maternal rejection (e.g., Raine et al., 1994). Salts, Lindholm, Goddard, and Duncan (1995) found that family relationships, problem school behavior, substance use, and delinquent behavior were all related to adolescent violent behavior. Economic disadvantage and stressful life events are also strong predictors of violent behavior (Garrett, 1995; Hammond & Yung, 1993). Guerra and her colleagues (1995) showed that low economic status was associated with violent behavior early in development, and that stressful events and

beliefs about aggression predicted aggression later in development. Patterson and his colleagues also propose an *early starter* vs. *late starter* model of delinquent behavior in which family (poor parenting), personality, and economic factors contribute to the early starter model and poor academic achievement and peer group affiliation contribute to a late starter model of delinquency and antisocial behavior (Patterson, DeBaryshe, & Ramsey, 1989; Patterson & Yoerger, 1993).

Child Resilience

To fully understand aggression and violence and how to prevent it, it is necessary also to have some understanding of the factors that contribute to child resiliency. Researchers use the term *resilience* to describe three kinds of phenomena in children (Werner, 1994): (1) good outcomes despite high-risk status, (2) sustained competence under stress, and (3) recovery from trauma. Each of these factors pertains to children at risk for aggression and violence. Earls (1994) summarized the resilient child as one who has an easy temperament and a higher IQ, is more autonomous but has a positive relationship with at least one supportive adult, and is attached to and successful at school.

Similarly, Werner (1984) found in her longitudinal study that resilient children who successfully adapted to adult life seemed to possess several protective factors. These included a temperament that helped the child elicit positive responses from a variety of caring persons, and skills and values that enabled accurate assessment of a child's available abilities in order to develop realistic educational or vocational goals. Resilient children also had involved parents who reflected competence and fostered self-esteem in their child, as well as other supportive adults who fostered trust and acted as "gatekeepers" for the future. These adults can include grandparents and other relatives, older mentors, or youth leaders. Resilient children also sought out environments that reinforced and rewarded their competence and helped them handle successfully life's major transitions.

III: DEVELOPMENTAL AND MENTAL HEALTH CONSEQUENCES OF CHILDREN'S EXPOSURE TO VIOLENCE

Extent of Impact

Hanke (1996) cautions against over-predicting the occurrence of violence and overreacting to media exaggerations and misrepresentations of the seriousness of school crime and violence. She argues that property crimes, not interpersonal violence, are the predominant form of crime at school, and that victimization rates from interpersonal violence at school are actually pretty low. Her focus, however, was on high school students, and their relatively low rates of victimization. Many studies document the higher rates of victimization for younger compared to older children at school and in the community (Singer et al., 1995; Singer et al., 1997; Richters & Martinez, 1993). Even if acts of personal victimization are significantly less common than property offenses, it is erroneous to assume that the impact of individual incidents of personal victimization are minor and inconsequential (e.g., Finkelhor, 1995) and that high rates of exposure to violence are without consequence for child mental health and well being (Flannery, 1996).

Exposure to violence is not without consequence. Martinez and Richters (1993) found that 50 percent of children exposed to trauma under age 10 developed psychiatric problems later in life, including increased rates of anxiety and depression. According to their mothers, nearly 3 out of 4 of these children had witnessed some form of violence, with older children being exposed to more violence than younger children (61 percent in grades 1-2, and 72 percent in grades 5-6). Distress symptoms were highest for children who had witnessed violence against someone they knew as opposed to a stranger. Fitzpatrick & Boldizar (1993) found that 27 percent of youth age 7-18 living in low-income housing met criteria for PTSD, which included symptoms of re-experiencing the trauma, avoidance, and arousal. Similarly, DuRant and colleagues (DuRant, Getts, Cadenhead, Emans, & Woods, 1995) examined exposure to violence among adolescents living in and around public housing. They found that even after accounting for other social factors, exposure to violence was associated with more depression, a greater sense of hopelessness, and feeling like there was little purpose in life.

While most of the research on the effects of violence on youth has focused on how community violence impacts on minority and inner-city youth (Osofsky et al., 1993; Richters & Martinez, 1993), responses to sexual abuse and specific traumas have also been explored (Finkelhor & Dziuba-Leatherman, 1994). But only recently have researchers begun to examine the impact of violence exposure and victimization on large samples of adolescents from diverse geographic locations and communities, including urban, suburban, and rural settings. Two of the most recent and well-conducted studies come from Boney-McCoy and Finkelhor (1995) and Singer and his colleagues (1995) in Cleveland, Ohio.

Boney-McCoy and Finkelhor (1995) conducted a national telephone survey of adolescents age 10-16 and found that one out of three had been victims of an assault at least once in their lives. Nearly 20 percent of adolescent males reported being victims of aggravated assault, and 13 percent of males said they had been victims of violent assault to the genitals (e.g., kicked during a fight). Over 15 percent of girls reported being victims of a sexual assault. Adolescents who reported being victimized indicated significantly more psychological distress and behavioral symptomatology than non-victimized adolescents. These problems included more post-traumatic stress disorder symptoms, more sadness, and more difficulties in school (e.g., experienced trouble with a teacher). Adolescents who said they were victims of sexual assault reported the highest levels of distress symptoms. These findings held even after controlling for other possible sources of distress, such as the size of the city the child lived in, the number of parents at home, and their level of poverty. Extrapolating from their findings for this random national sample of adolescents, these researchers estimated that over 6.1 million youth age 10-16 have suffered some form of assault, placing them at risk for related symptomatology and school difficulties.

Singer and colleagues (1997), in a survey of over 3,700 adolescents in grades 9-12, found community violence exposure was positively and significantly associated with depression, anger, anxiety, and dissociation (Singer et al., 1995). They have recently demonstrated the same strong relationship between violence exposure and PTSD symptoms for elementary school children (grades 3-8), with

nearly 40 percent of them exposed to high levels of violence reporting clinically significant post-traumatic stress disorder symptoms. Rates of clinically significant psychiatric distress for children in grades 3-8 were very similar to those for adolescents (see Table 3). The relationship between exposure to violence and PTSD symptoms holds true for children and adolescents in urban, suburban, and rural settings (Singer et al., 1995; Singer et al., 1997). In addition, adolescents exposed to and victimized by high levels of violence report significantly higher levels of clinically significant distress. Thirty percent of both boys and girls in the high exposure group reported themselves to be in the clinically significant range on one or more post-traumatic stress disorder symptom. Over 40 percent of adolescent girls in the high exposure group said they had thought about wanting to kill themselves, as opposed to 17 percent of girls in the low exposure group. Eighty-five percent of boys in the high violence exposure group said they wanted to hurt other people, compared to 40 percent of boys in the low exposure group. The evidence clearly indicates that children and adolescents are exposed to and victimized by violence at extremely high levels, and they are significantly impacted by chronic exposure and victimization, especially in their experience of PTSD and related symptomatology (Bell & Jenkins, 1991).

Effect on Early Child Development

Victimization by violence can disrupt the course of child development in very fundamental ways (Flannery, 1996; Osofsky, 1997; Pynoos & Eth, 1985), and can be associated with symptomatology over the course of the life span (Briere, 1992; Terr, 1991). A child exposed to chronic violence is also more likely to form disorganized attachments to caregivers and other adults, and to experience difficulty in developing a healthy sense of initiative (Osofsky, 1995). Children exposed to or victimized by violence may experience heightened anxiety or sleep disturbance, have difficulty achieving bowel and bladder control, or experience delays in language acquisition (Drell, Siegel, & Gaensbauer, 1993). Each of these problems is closely tied to a child's growing sense of independence, efficacy, and mastery of the environment. A child exposed to chronic violence may develop a sense of learned helplessness, seriously affecting mood and the development of a sense of self-control. Early exposure may also seriously damage a child's sense of future

Table 3
Percent of Students in the Clinical Range for Post-Traumatic Stress Disorder Symptoms Depending on Low Versus High Levels of Exposure to School Violence

Grades 3-8

	Females		Males	
PTSD Symptom	Low Violence Exposure	High Violence Exposure	Low Violence Exposure	High Violence Exposure
Anger	2.9	14.3	1.4	16.3
Anxiety	4.6	23.2	2.2	14.7
Depression	4.6	20.1	3.3	17.6
Dissociation	4.6	19.6	2.5	15.7
Stress	4.3	18.7	2.2	13.5

Grades 9-12

	Females		Males	
PTSD Symptom	Low Violence Exposure	High Violence Exposure	Low Violence Exposure	High Violence Exposure
Anger	2.5	13.1	5.7	33.3
Anxiety	3.0	13.3	1.2	9.8
Depression	3.2	11.7	3.3	11.7
Dissociation	2.9	10.5	2.1	8.9
Stress	1.5	11.9	3.3	12.3

Sources: Elementary school data: Singer, Miller, Slovak, & Frierson (1997).
High school data: Singer, Anglin, Song, & Lunghofer (1995).

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orientation and hopefulness. One of the most disturbing admissions from violent adolescents is that they have little hope of living very long. Much of their behavior is focused on living in the "here and now," driven by a need for immediate gratification, all laced with a sense of hopelessness about their future (Eron et al., 1994).

Osofsky (1995) and others have pointed to the potential difficulties in affect regulation for young children exposed to or victimized by violence. Affect regulation is an important developmental task with respect to learning how to regulate aggressive impulses, in differentiating between different emotional states of others (e.g., recognizing their anger or frustration), and in learning prosocial behavior and competence. School-aged children chronically exposed to violence in their environments may experience PTSD-related symptoms such as increased anxiety, irritability, and distractibility. Sleep disturbances and nightmares are also common for children of all ages as a consequence of violence exposure (Pynoos, 1993). All of these symptoms would impair a child's ability to learn at school.

The family is a critical context for affecting child development and moderating the impact of violence exposure and victimization (Davies & Flannery, in press). A strong relationship exists between children's exposure to community violence and intrafamily conflict (Chicchetti & Lynch, 1993). For infants and toddlers, the most of their exposure to violence will occur in or near their home. Perpetrators of aggressive, violent behavior are most likely to be a parent, sibling, or other adult caregiver (Finkelhor & Dziuba-Leatherman, 1994). These are the same individuals with whom a young child is attempting to form secure attachments, the same individuals on whom the child depends for having his or her basic needs met, and the individuals who are the primary role models and socializers of the child. As a child grows older, teachers and other adults at school can become significant role models and socializers.

Developmental Victimology

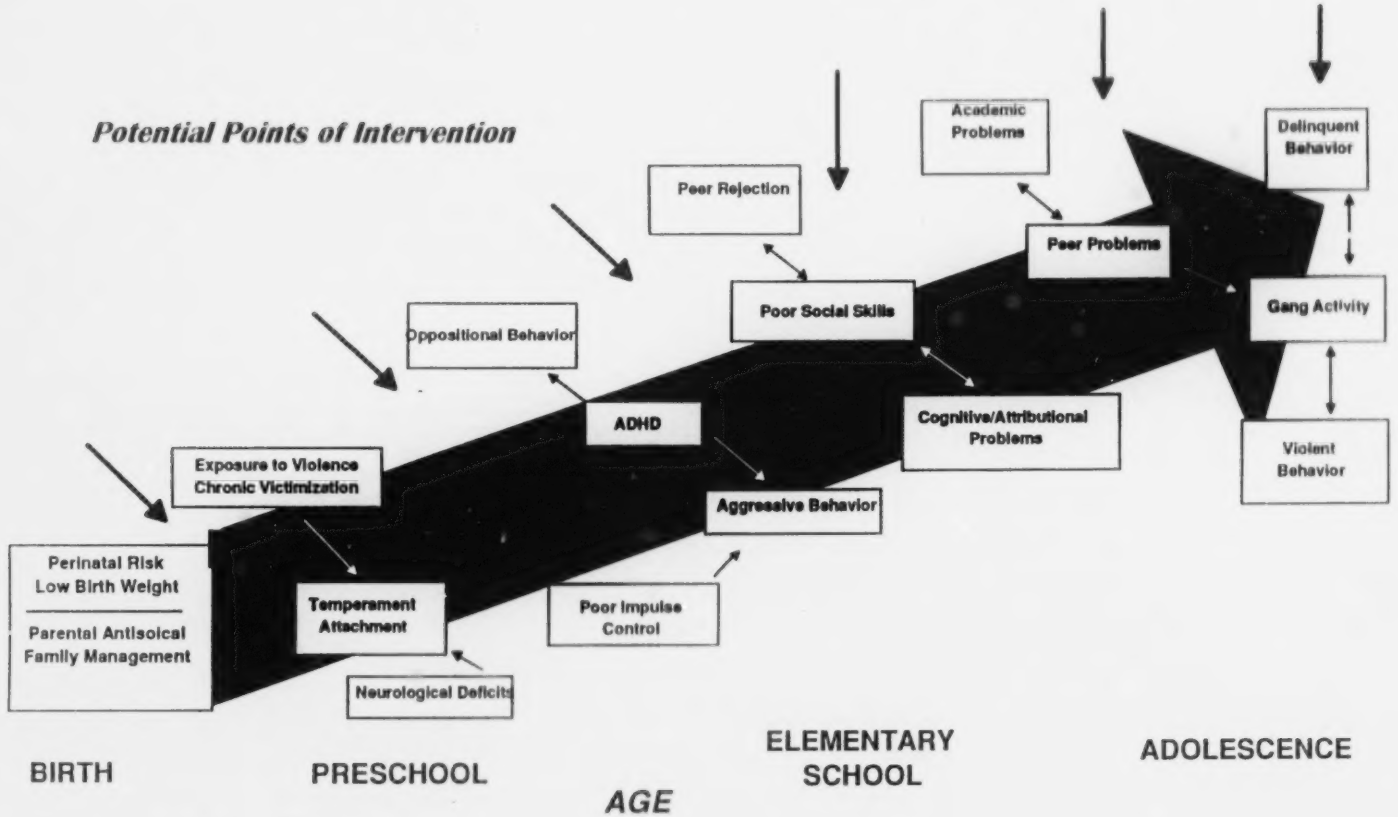
Finkelhor (1995) calls for a new field of "developmental victimology" with two branches: (1) the developmental aspects of risk (i.e., toddlers are rarely the

targets of gang violence), and (2) the developmental aspects of impact (i.e., how children respond to victimization depends on their stage-specific capacities and vulnerabilities) (Newberger & DeVos, 1988). The primary risk factors include children's suitability as targets, their ability to protect themselves, and the environments they inhabit. Impact focuses on developmental processes that affect children's reactions to victimization, the timing of developmental tasks and critical periods, the processes of cognitive appraisal, and forms of symptoms expression, which may vary developmentally (Pynoos, 1993).

With respect to the developmental aspects of risk, a child's age often affects not only the likelihood of victimization, but also the likelihood of disclosure or reporting (Finkelhor, 1995). Exposure and victimization are most likely to impact development if (1) the victimization is repetitive and ongoing (Kirby, Chu, & Dill, 1993; Osofsky, 1995), (2) the victimization dramatically changes the nature of the child's relationship with his or her primary support system (Osofsky et al., 1993), (3) the victimization adds to other serious stressors (Mullen, Martin, Anderson, Romans, & Herbison, 1993), and (4) the timing or source of the victimization interrupts a critical developmental transition. Developmentally specific effects can be divided into three domains: the impact of victimization may differ as a result of (1) the developmental tasks or developmentally critical periods the child is facing at the time of the victimization, (2) developmentally specific cognitive abilities of children that affect their appraisal of the victimization, and (3) differences in the forms of symptom expression available to the child at particular stages of development.

Flannery and Williams (in press) have proposed a developmental sequence to violent behavior that illustrates the etiology of risk for aggression and violence, beginning with perinatal risk and parent antisocial and family management difficulties, emerging in adolescence as delinquent behavior, gang activity, and violence. Placing risk factors on a developmental continuum can suggest when and how to intervene to reduce aggression and violence (see Figure 1).

Proposed Developmental Sequence of Violent Behavior



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Impact of School Violence

In examining context-specific exposure to violence in elementary and high school students, Singer and his colleagues (1995) have been able to separate out violence at home and in the neighborhood from violence at school. In their high school sample they also assessed adolescent coping strategies. For both males and females, higher levels of exposure to school violence were found to be associated with significantly higher levels of self-reported anger, anxiety, depression, dissociation, stress, and overall psychological trauma. Exposure to violence at school was also strongly related to child self-reported violent behavior, with children in the high exposure group reporting three to four times higher levels of violent behavior than children in the low violence exposure group. These findings for the association between school violence and PTSD symptoms and violent behavior were consistent for children in grades 3-8 and youth in grades 9-12, two separate cohorts of data collected three years apart. The associations also held true for students in urban, suburban, small city, and rural schools (Singer et al., 1995).

For the elementary school sample, the association between trauma symptoms and violence exposure at school increased from third to sixth grade before declining again in eighth grade. For the high school cohort, the association between exposure to violence at school and trauma symptoms was highest for ninth graders, and declined steadily to twelfth grade. Overall, the association between school violence exposure and trauma symptoms was highest for sixth graders. The overall level of symptom expression was higher in the early elementary grades and generally declined as children got older. For example, third graders reported the highest levels of anxiety, depression, dissociation, and stress related to their exposure to violence at school.

How do adolescents cope with exposure to violence at school? The most frequently endorsed coping strategy was listening to music, followed by being with a friend. Rarely do adolescents talk to a teacher or counselor, one of the least frequently endorsed methods of coping with stress (see Table 4). Getting involved with school activities was also rarely endorsed as a strategy, although high school boys reported that playing sports was a way that they frequently coped with stress.

Table 4

Adolescent Male and Female Coping Strategies

Positive Coping Styles	Play sports
	Talk to friends
	Help others with their problems
	Talk to family members
	Go to church
	Get involved with school activities
	Talk to teacher, minister, counselor
	joke
Neutral Coping Styles	Be with boyfriend/girlfriend
	Cry
	Listen to music
	Be by myself
Maladaptive Coping Styles	Get angry
	Sleep
	Watch television
	Say something mean to someone
	Use drugs or alcohol

Girls were much more likely to cry than boys. For both girls and boys, increased levels of exposure to school violence were related to higher levels of maladaptive coping strategies such as getting angry, sleeping, saying something mean to other people, and using alcohol or drugs. These maladaptive coping strategies are of concern because each of them could contribute to an escalation of interpersonal conflict at school.

Effects of Bullying

The majority of bullying that young people experience takes place at or on the way to school. Olweus and colleagues (Olweus, 1994), who have done the most comprehensive work in this area, define bullying as situations in which a person is exposed, repeatedly and over time, to negative actions by one or more other persons. The definition excludes situations in which two peers of equal strength or size are fighting. The actions consist of intentionally inflicted injury or discomfort. Bullying is characterized by some imbalance of strength and power, and it can include the use of words, gestures, or physical contact to carry out the harassment.

Bullies most often direct their aggression toward peers, but their behavior may also carry over to teachers, parents, and siblings. Bullies have a fairly positive attitude about violence and often see aggression as a legitimate way to achieve a goal. They are also often impulsive and have a strong need to dominate others. They have little empathy for their victims, and they are likely to be stronger than their peers and victims. Bullies are at high risk for long-term rejection from the normative peer group, academic failure, and subsequent involvement in delinquency and criminal behavior.

Victims, on the other hand, tend to be more anxious, insecure, and lonely compared to other kids. They are usually physically weak, at least compared to the person doing the bullying. In Olweus' longitudinal work, victims of bullies in middle and high school (age 13-16) reported significantly higher levels of depression and poorer self-esteem at age 23 than controls.

IV: THE SCHOOL AS A SETTING FOR VIOLENCE AND PREVENTION

Schools are charged with educating all who walk through their doors and everyday they must face the challenges brought by a diverse student body. Many children are poorly prepared to meet even the most fundamental demands of the school day, and struggle to have their basic needs met. Children bring into the classroom their family environments, their experiences in the neighborhood, their attitudes about how to handle frustration and respond to discipline, and their entire socialization and view of the world. The spillover of the social and economic conditions of neighborhoods and communities into schools is pervasive and broad ranging.

School Risk Factors

Noguera (1995) examined different aspects of the structure and function of schools that increase the likelihood of acts of violence there. Historically, schools have served three main functions. First, schools have primarily operated as agents of social control. According to Noguera, schools have long been charged with maintaining a custodial role similar to that of the asylums, which was to regiment, control, and discipline those who were housed there. The second function of schools was to acculturate and Americanize a large number of children of European descent. Third, schools were meant to prepare future workers for U.S. industry. These goals have influenced school policy and the ways schools are administered.

Concerns about order, efficiency, and control dominated the thinking that guided the early development of schools in the U.S. By the 1960s control and compliance were increasingly difficult to obtain, and many urban schools lowered their expectations about behavior and began to focus on average daily attendance because that was the basis of funding formulas. Exploration of alternative ways of responding to violent behavior would require a fundamental change in how the institution and the provision of educational services were conceptualized by those in authority.

This historical preoccupation with control has limited the ability of schools and administrators to respond creatively to the crisis created by the increase of violence and disorder (Noguera,1995). The strategy that many systems adopt is one of converting schools into prison-like facilities. The belief is that the best way to reduce violence is to identify students with the potential for committing acts of violence, and to exclude them from the rest of the population. Noguera argues that schools must find ways to create more humane learning environments so that students, staff, and administrators feel less alienated, threatened, and repressed.

Morrison, Furlong, and Morrison (1994) offer a framework for safe versus unsafe schools, arguing that safe schools are effective, while unsafe schools cannot and will not be effective. Unsafe schools are characterized by chaos, stress, and disorganization. They lack clear and consistent school disciplinary expectations and are poorly designed with respect to the use of physical space. Staff members are unable to monitor and supervise student behavior effectively or efficiently. Safe schools, on the other hand, are characterized by a more positive school climate and atmosphere; have high levels of student, staff, and parent participation; have students who are attached to their school; and have clear and high expectations for student performance and behavior.

School is also a place where children from diverse racial and cultural backgrounds come together and spend a great part of their day together. This can contribute to incidents of violence due to racial tension, cultural differences in attitudes and behavior, or an admixture of children from diverse neighborhoods (e.g., busing children to school from a different part of town). Regulus (1995) calls for an integration of a staff culture that emphasizes nonviolent means of conflict resolution with the student culture. Student culture reflects normative adolescent developmental issues, such as the important influence of the peer group, increased need for independence and autonomy, and the struggle to establish a personal identify, as well as recognition of culture specific-priorities like maintaining personal racial or ethnic identity.

Attending to race and culture issues acknowledges that schools do not operate in a social or cultural vacuum. Several researchers and educators have

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pointed out that the community context of a school is critical to the level of school crime and violence at that school (Felson, Liska, South, & McNulty, 1994; Hellman & Beaton, 1986; Menacker et al., 1990). This relationship has significant implications for intervention, because even great emphasis and effort on altering the general climate within the school building would be difficult to sustain over time without support from the neighborhood or a concomitant change in the surrounding community. This makes sense, particularly in light of the reason for such high recidivism rates among juvenile offenders: after incarceration, individuals often return to the very environments, peer groups, neighborhoods, and social factors that contributed to their initial involvement in delinquent and criminal activity (Lipsey, 1992; Mulvey, Arthur, & Repucci, 1993).

Teachers and administrators are increasingly isolated from the students and neighborhoods they serve, particularly in urban areas. This distance is exacerbated by fear. Teachers who are afraid of their students or are uncomfortable in their workplace will have difficulty maintaining order and discipline. In Tucson, one elementary school teacher actually smells her students as she greets them at the door of her room each morning; this tells her about what the student may have done that morning or the night before. When fear is at the center of the student-teacher relationship, teaching becomes almost impossible, and concerns about safety and control take precedence over concerns about learning and teaching.

In general, school factors that are conducive to disorder, crime, and violence include: (a) overcrowding; (b) high student/teacher ratios; (c) insufficient curricular/course relevance; combined with (d) low student academic achievement and apathy, which give rise to disruptiveness; (e) poor facilities design and portable buildings that both increase isolation and hamper internal communication; and (f) adult failure to act because cognizant leaders improperly identify potentially inflammatory situations, are reluctant to admit a problem, believe nothing will work, or simply do not know what to do (Rossman & Morley, 1996; Sautter, 1995; Watson, 1995). In addition, the perception of a pervasive climate of fear of violence and crime makes it difficult to attract and retain good teachers, particularly in inner-city schools, and thus to attain educational objectives. School discipline may suffer as teachers hesitate to confront misbehaving students because they fear

for their own safety. In addition, students are sophisticated enough to recognize a teacher's limitations with respect to using discipline or force to gain compliance and retain order in his/her classroom (Rossman & Morley, 1996).

Large and Overcrowded Classrooms

Teachers are often unprepared to deal with the challenges presented by their students and the system within which they must operate (Thayer, 1996). According to Walker and Gresham (1997), a major challenge consists of large schools and classrooms that make it difficult for teachers to develop and maintain meaningful relationships with students, especially at-risk students who have more intense needs for attention and involvement. In addition, overcrowded schools have more discipline and vandalism problems. A high child-to-teacher ratio makes it practically impossible for teachers to effectively monitor their students' behavior, so discipline problems and crime increase (Hellman & Beaton, 1986). Teachers in these schools are increasingly isolated from each other, from parents, and from the neighborhoods and communities where their students (but not necessarily the teachers themselves) live. Finally, Walker and Gresham argue that many schools have become virtual fortresses of safety, steps which have been required by the escalating rates of violence. All of these conditions make it extremely difficult for schools to effectively educate their students.

There are many repercussions from oversized and overcrowded schools that have a high child-to-adult ratio. From a practical perspective, any time taken to monitor and discipline is not available to educate, motivate, and teach. Further, the specific incidents of conflict and disagreement that are known to precede subsequent acts of aggression and violence go undetected in large classrooms, in the lunchroom, or on the playground. Most intervention programs, like conflict mediation, can only mediate the most serious forms of discord. If they were to mediate all of the minor conflicts, teachers would have little time left in the day to spend on instructional activities. This creates a situation wherein serious forms of conflict and disagreement are differentially reinforced because these are the events which receive attention and mediation. The "minor" disagreements (which occur more frequently) often go undetected and are rarely mediated (Webster, 1993).

Weapons and the Perceived Need for Protection

Firearms are increasingly available to young people, and more and more children are bringing weapons to school because they say they fear for their safety. Several recent studies highlight the increased availability and use of firearms among youth. For example, Harrington-Lueker (1992) estimated that 580,000 teenagers, about 1 in 20, carry weapons into schools every year. Sheley and Wright (1993) recently surveyed male incarcerated offenders and males in 10 inner-city high schools about their use of and access to firearms, and while their findings cannot be generalized to other populations, they were somewhat sobering. Approximately 83 percent of inmates (average age 17) and 22 percent of students said that they possessed guns, and over half of inmates said they had carried guns all or most of the time in the year or two before being incarcerated. This compared to 12 percent of high school students who reported regularly carrying guns to school; nearly 1 in 4 reported doing so "now and then." Perhaps even more disconcerting was the ease with which both incarcerated and high school males reported they could acquire a gun. Only 13 percent of inmates and 35 percent of high school males said they would have a lot of trouble getting a gun; nearly half of all respondents indicated that they could "borrow" one from family or friends, and many said they could get one "off the street" (54 percent of inmates and 37 percent of students).

The most frequently endorsed reason for owning or carrying a gun was self-protection: these inner-city youth were convinced they were not safe in their neighborhoods and schools. According to a book recently produced with support from the Carnegie Foundation, the median age of first-gun ownership in the United States is twelve-and-a-half; often the gun is a gift from a father or other male relative (Millstein, Petersen, & Nightingale, 1993).

Gangs

Participation

Schools are a place where many active gang members recruit new members (Walker, Colvin, & Ramsey, 1995). Schools are also places where children are

exposed to gang activity. In Tucson, 42 percent of children in grades K-5 reported seeing gang activity in the last two weeks at school, and many third graders openly admitted gang involvement (Embry et al., 1996). This can include fighting among gang members, graffiti on the walls of the school, or talking about gang members or gang activities at school (Trump, 1996). Gang members are also identified by clothing (a particular sport team's clothing) or color (blue or red).

Several common criteria are typically used to define gangs: (1) a formal organizational structure; (2) an identified leader or leadership hierarchy; (3) identification with a specific territory or turf (usual but not essential; (4) recurrent interaction among the members of the group; and (5) group engagement in delinquent or criminal behavior (Howell, 1994; Klein, 1995). The last criterion, participation in problem behavior, is the characteristic that distinguishes gangs from other, more prosocial adolescent groups. Curry, Box, Ball, & Stone's law enforcement survey for 1991 (1994) estimated that there were 4,881 gangs in the U.S. with 249,324 members. There are several excellent overviews of gangs, gang activity, and developmental issues related to gangs (Huff, 1996; Flannery, Huff, & Manos, in press).

Who belongs to a gang? Gang members typically range in age from 14-24, with the peak age of gang membership around age 17, although in some cities the gang members are somewhat older. Evidence exists that children as young as age 8 are gang involved or are gang "wanna-be's" (Huff, 1996; Embry et al., 1996). To some degree gang membership depends on where youth live. In established gang cities such as Los Angeles or Chicago, the majority of gang members tend to be adults, whereas in cities reporting recent or emerging gang problems, up to 90 percent of gang members are believed to be juveniles. Certainly not every youth is involved in gang activity. Most reports estimate that between 5 and 8 percent of youth are at high risk for engaging in violent, gang-related activities (Tolan & Guerra, 1994). Though no reliable national data exist, a recent Denver study estimated that 7 percent of inner-city, high-risk juveniles were gang involved (Esbensen & Huizinga, 1993).

Based on research in Colorado, Florida, and Ohio, Huff (1996) identified a developmental progression from "hanging out" with the gang (being a gang "wanna-be") to joining the gang and getting arrested. Gang members reported that they first began associating with the gang at about age 13, and joined, on average, about 6 months later. They were then arrested for the first time at about age 14, one year after beginning to associate with a gang and about 6 months after joining. Arrests for property crimes peaked 1-2 years before arrests for either drug offenses or violent offenses. Huff found that a high percentage of gang leaders' declining arrest rates was due to incarceration and death by homicide, not to protection by gang membership. The gang lifestyle places individuals at much higher risk than normal.

Gangs are also appearing in more and more cities, particularly smaller communities (Maxson & Klein, 1993). Curry, Ball, & Fox (1994) reported that more than 90 percent of the nation's largest cities report youth gang problems, up from about 50 percent in 1983. This appears due to family migration and local gang genesis more than to relocation, suggesting that gang formation is not due solely to the recruitment of youth to "other city" gangs. Even very young children report exposure to gang activity at school (Embry et al., 1996; Taylor et al., 1994). In Tucson, 42 percent of youth in grades K-5 reported seeing gang activity at school in the past week (Embry et al., 1996). This trend among young people is a serious concern because the Tucson data were collected from self-contained elementary schools, limiting the possibility that youth were reporting gang activity of older peers, or, conversely, suggesting that older peers were coming to elementary schools to recruit younger members.

The racial and ethnic composition of gangs is rapidly changing. Until the mid-1900s, the majority of gangs in America were white, representing various European backgrounds. By the 1970s an estimated 80 percent of gang members were either African American or Hispanic, and in the last few years Asian groups have been rapidly emerging. The ethnic composition and social class position of gang members have remained fairly constant, with gangs comprised of recently migrated youth and those of lower socioeconomic status (Howell, 1994).

Female gang membership is also increasing (Chesney-Lind, Sheldon, & Joe, 1996), although girls still account for a relatively small percentage of gang-involved youth: 3.5-6.0 percent (Curry et al., 1994). In 1992, 40 cities reported female gangs with an estimated 7,205 members (Curry et al., 1994). Historically, the stereotype of girls in gangs and delinquent girls in general was that these girls were either tomboys or sex objects (Campbell, 1995) or a form of male property (Jankowski, 1991). Female delinquency was viewed as interpersonal and sexual while boys' offending was viewed as aggressive and more criminal in nature (Chesney-Lind & Sheldon, 1992).

Intervention

Some safety measures at school are implemented specifically to reduce gang activity and children's exposure to gangs at school. Over half of school administrators report they have banned gang clothing and insignias (Thayer, 1996). Often, the primary purpose of metal detectors is to reduce the risk of gang-involved youth bringing firearms or other weapons onto school grounds. Sometimes schools partner with communities to restrict vehicle access to school parking lots (to decrease loitering and quick drug sales), or with local law enforcement agencies to create violence-free school zones.

In some communities schools have formed special police units to address violence in the schools. In 1991, Cleveland Public Schools, in collaboration with the local police, created a Youth Gang Unit. A relatively small contingent of half a dozen officers service 127 schools and over 73,000 students. From 1991 to 1993 the schools noted a nearly 40 percent reduction in school gang incidents, dropping from 381 in 1991 to 231 in 1993 (Huff & Trump, 1996). The police presence in 1997 continues to deter gang activity at schools in the Cleveland district.

Traditional Approaches to Safety

In general, schools thought to promote violence have high rates of exposure to violence and victimization, a significant number of children who report not feeling safe there, the presence of bullies, a widely diverse student population, and

an inability to effectively monitor and discipline children, especially for the seemingly minor conflicts which occur between children at a high rate and on a daily basis.

Ensuring that basic safety needs are met is an essential first step in providing a child with a school environment conducive to learning and socialization. One "first step" approach to addressing school violence is implementation of an effective security program. This is only one feature of a comprehensive prevention and intervention strategy, but may be a necessary initial component in some school settings. The top priority for elementary schools is to protect the safety of their students. At the higher grade levels, the emphasis shifts from protecting the students to protecting teachers and school property from the students themselves (Sabo, 1993).

Unfortunately, some schools treat this "first step" as their only move forward in reducing school violence. The overall momentum of school policy strategies for reducing violence and crime has been to "get tough." The more popular approaches include: the installation of metal detectors at school entrances to prevent students from bringing weapons onto school grounds; enacting *zero tolerance* policies that require automatic suspension or removal of students for bringing weapons on school grounds; the use of police officers as security guards; an increased tendency to treat violent incidents as criminal acts to be handled by law enforcement and courts rather than by school personnel; and the creation of alternative schools or programs for youth deemed too unruly for the regular school setting. These strategies reflect an increased rigidity in school policies for dealing with violent students and violent incidents.

Less punitive approaches include conflict resolution to settle disputes nonviolently, mentoring programs to provide at-risk students with supportive adult role models, new curricula to build character and develop moral reasoning (Goldstein & Glick, 1994), and partnerships between schools and social service counseling agencies. Schools that focus on increasing control have adopted a strategy similar to "hardening the target," a term used by criminologists for the increased security by stores and banks to prevent robberies. Hardening the target

might include installing video cameras, metal detectors, bars on the windows, or alarm systems; and hiring additional security personnel. All of these hardening tactics send the message that it will be difficult to perpetrate a crime or violence at that location. Schools have been undergoing the same transition. Some argue that one reason for the recent decline in crime rates overall is that crime is harder to perpetrate, in part due to the hardening of potential targets, including a hardening of the individual as a target (e.g., by carrying concealed weapons). While such strategies may result in a reduced number of weapons in schools and in decreased injuries and homicides in school buildings, they will do little to ameliorate the conflicts that precede violent interchanges, the situational factors that can escalate into violence, or the difficulties young people encounter in effectively resolving disputes.

Other school safety strategies include implementing policies for school staff to identify and refer school visitors to the office for appropriate identification (e.g., wearing an identification badge). All staff and volunteers at a school are made aware of entrances and exits, and which individuals are permitted to be in hallways during in-class hours (e.g., students with hall passes, volunteers monitoring the hallway and school grounds). Hoffman (1996) and Morley and Rossman (1996) have recently reviewed different programs that can be implemented by schools and staff to address school crime and violence.

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V: THE ROLE OF EVALUATION RESEARCH IN REDUCING SCHOOL VIOLENCE

Need for Evaluation

Most violence prevention efforts represent the thoughtful responses of professionals, advocates, and policy makers to the escalation of fear, violence, and disorganization in the schools. Most are also offered in the absence of any evidence of their effectiveness (Kazdin, 1993). The lack of outcome effectiveness data is one of the major reasons why Congress has recently reduced funding for drug and violence prevention in schools (Modzeleski, 1996).

It is not that there is limited interest in determining the effectiveness of efforts to reduce school violence, but that there are often limited resources for doing so. A common observation from school administrators is that in this era of scarce resources there is little justification for spending money on evaluation when funds could be used for the provision of programs and services. How do you tell a parent that the fifth graders could not get a classroom program implemented because funds needed to be set aside for research? The answer is, in part, that schools will soon have no choice. In the face of consistently declining Federal support for safe school initiatives, schools will need to increase their appeals to alternative funding sources, such as businesses, families, and community foundations. These potential funders have begun to demand clear evidence that programs are effective, efficient, and cost beneficial. No longer will schools and other organizations receive "entitlement" money to implement programs at their discretion, independent of whether there exists evidence of the program's effectiveness at their own site. Even the U.S. Department of Education has recently demanded objective outcome evaluation data for the Title IV Safe Schools money allocation (Embry, personal communication, Fall 1997).

Along with limited resources, there is limited knowledge of what works best, and why, to reduce violence at school, as well as limited energy to sustain long-term efforts to effect positive change. One way to gain knowledge and to implement strategies known to be effective, efficient, and cost beneficial is to

consider implementing only violence prevention strategies that have been empirically validated with intensive and thorough evaluations of program effectiveness. To do this, it is necessary to understand the role of evaluation research in reducing school violence. The basic premise here is that evaluation is essential to implementing successful long-term school violence prevention programs. Evaluation can inform effective implementation of a program; enable a school to demonstrate the value of the program to the community, to parents, and to potential funders; and influence the formation and implementation of social policy, both locally and nationally. This is not to say that evaluation is easy to do, cheap, or a magical panacea.

Types of Evaluation

In any intervention program, the three most basic questions that are asked are: (1) What are the program's results, what does the program change? (2) What about the program makes it work or be effective? (3) Is the program cost effective? Four basic types of evaluation can be integrated into the existing structure of most schools and programs to address these questions. They are a needs assessment, outcome evaluation, process or monitoring evaluation, and cost-benefit analysis.

A ***needs assessment*** (or formative evaluation) helps a school determine what its needs are regarding violence reduction and prevention. Many schools might skip this first type of evaluation, believing that they know they need to do something to reduce violence. However, answering several questions first might help a school develop a more effective strategy in the long run. For example, what is the prevalence of violence and victimization at the school or in the neighborhood? What is the impact of violence on child adjustment and mental health and learning? What are school costs for vandalism and discipline problems related to violence? What is the extent of gang activity at school? Answering these questions, for example, will help a school choose appropriate components for its safety plan: does the plan need to include installation of metal detectors and surveillance cameras, does it need to focus on developing prosocial competence in the youngest students, or both? Obviously a high school will have safety concerns different from an elementary or middle school, so the same safety plan will not be equally effective in

all schools, in all contexts, and for all children.

The second type of evaluation is called ***outcome evaluation***. This evaluation answers the question "what changed because of the intervention?" Did the program reduce child problem behavior, aggression, delinquency, or violence? Did the program increase student attendance and improve school grades? Did it result in reduced discipline visits to the principal's office? Did it result in increased social competence or improved social skills? All of these are appropriate outcome evaluation questions. Being clear about what the program is meant to address (and not address) is essential to measuring its effectiveness. Some popular programs have not resulted in changes in desired behavior, although they may still have some positive effects on knowledge or attitudes (e.g., Ringwalt, Greene, Ennett, Iachan, Clayton, & Leukfeld, 1994). For example, a substance abuse prevention program may do little to reduce victimization by violence or the perpetration of violence, and teen pregnancy reduction is not violence prevention.

Certainly some of the factors that underlie most problem behaviors in children are shared by intervention strategies: improving problem-solving and conflict resolution skills, increasing attachment to school and success at school, improving communication and social skills, etc. These are valuable targets of intervention for most students in most schools. If they are the focus of the violence prevention intervention, they must be clearly explicated. The reasons why these are the outcomes and how they relate to reductions in aggressive behavior, conflict, or violence must also be clearly stated. This requires a clear understanding of the risk factors the school is attempting to ameliorate or the protective factors it is trying to promote. Clearly defining program goals and desired outcomes will go a long way toward establishing relevant and effective outcome assessments of the program's success.

The third type of evaluation is a ***process evaluation***. Process evaluation attempts to address the question "what works best about our program and why does it work?" Is program effectiveness related to quality of teacher or staff training, the number of years an individual has been teaching, strong administration support for the program, scope of the program (i.e., schoolwide or confined to lessons in one

classroom), or active parent involvement in program implementation and support? For example, Flannery and Torquati (1993), in an examination of a middle school substance abuse prevention program, found that teachers believed that parent involvement as volunteers in the classroom was the biggest factor in determining the program's success for students. Parent involvement was rated as more important than administrative support, quality of teacher training, and even than the teacher's own "buy in" of the program's importance and effectiveness.

The last type of basic evaluation is ***cost-benefit analysis***. A cost-benefit evaluation answers the question "is the program cost effective?" It might include an assessment of how much the program costs to implement per student or school, or how much the program saves in other related costs (e.g., vandalism). One of the most intriguing and comprehensive cost-benefit evaluations was conducted recently by the RAND Corporation. Greenwood, Model, Rydell, and Chiesa (1996) examined the cost effectiveness of several crime prevention strategies involving early intervention in the lives of people at risk for pursuing a criminal career. Focusing on California, Greenwood et al. contrasted the state's *Three Strikes* policy that mandates extended sentences for repeat offenders with four different approaches: (1) home visits by childcare professionals, beginning before birth and extending through the first 2 years of childhood, followed by 4 years of daycare; (2) parent training for families with aggressive or acting out children; (3) 4 years of cash and other graduation incentives for disadvantaged high school students; and (4) monitoring and supervising high school youth who had already exhibited delinquent behavior. All of the examined programs, with the exception of home visits and daycare, were appreciably more effective at reducing serious crimes than was the Three Strikes policy. Graduation incentives for disadvantaged youth proved the most cost-effective approach, averting nearly $260 million lost from serious crimes compared to about $60 million for the Three Strikes option. These findings have serious implications for policy makers who believe that increased incarceration time for juvenile offenders will systematically and over time reduce the youth crime rate.

Evaluation Methods

There are many techniques that schools can utilize as part of an evaluation strategy. Many different kinds of information are readily available to schools for low cost and effort. Potential sources of information include the self-reports by the students, teachers, parents, and principals. Student reports about violence and victimization will be increasingly difficult to gather, however, given the increased attention to the protection of human subjects, particularly minors, in behavioral and medical research; research may still be conducted on these important topics, but the days of large surveys with thousands of students may be past.

Most schools also collect archival data as part of their everyday operations (attendance, grades, conduct ratings on report cards, disciplinary contacts, suspension, weapons violations, visits to the nurse's office for treatment of injury, costs of vandalism and property destruction). Some additional archival data could also be collected that is not currently systematically recorded in most schools. These include visits to the principal's office for disciplinary action, and observational ratings of aggressive behavior in the classroom, lunchroom, and on playground. These measures are two of the most accurate predictors of which young children are at increased risk for subsequent delinquent behavior and arrest for criminal activity as adolescents (Walker & Sylwester, 1991). Schools may also partner with local police or sheriff's departments to gather aggregate data on community crime and the nature or types of contacts children from their school have with the police. Of course, police officers should only report to schools substantial incidents of problem behavior, not random stops or checks of youth that do not result in any official action.

What should be the strategy for collecting this information on program effectiveness? There are three basic components to any evaluation that will make the results more readily interpretable and valid. The first to collect outcome data before the intervention is implemented. This information provides the school with a baseline of student behavior, grades, attendance, etc., from which change can later be determined. Report cards from previous grading periods constitute one example. The second is to include in the assessments, whenever possible, a comparison

group of students (or classrooms or schools) who are not exposed to the intervention. A comparison group (preferably very similar to the students in the intervention with respect to gender, age, risk status, etc.) will allow a determination of whether and how the intervention is effective for children in the program as opposed to those not in the program.

An example may help here. Assume a school identifies 50 third graders at risk for school failure and delinquency. It collects baseline information on these students and then exposes them to an intensive 25-week curriculum aimed at improving their problem-solving and social skills and their academic achievement, and reducing their aggressive behavior. The school then collects information on the students immediately after the curriculum is finished. It finds that, indeed, these students are better problem solvers and are less aggressive. Unfortunately, the design does not provide a clear answer to an essential question: how does the school know that the observed changes resulted from the curriculum? Could it be that third graders, simply because they have matured over time, have better social skills and are less aggressive over a 25-week period? Some programs that have been evaluated have not shown significant reductions in aggressive behavior among some children, and the initial belief about them was that they were ineffective. It was not until recently that researchers began to demonstrate that many children experience increases in aggressive behavior over time. Thus, even if a program does not result in an appreciable decline in aggression, it may have a "blunting" effect in that participants do not experience the expected increase in aggression (Tolan, Guerra, & Kendall, 1995). Assessments of comparison groups of students not participating in violence prevention programs contributed to this realization.

The third component of an effective evaluation design is random assignment of students to treatment groups or controls. This is the most difficult, practically and ethically, to achieve, and may not be possible in most "real world" situations. Random assignment of two equally deserving children, with similar assessments of both children, provides the strongest evidence that it was the treatment that caused any observed differences in a child's outcome. One strategy that has been used successfully is random assignment of students (or classrooms or schools) to

treatment or control groups at the beginning of an evaluation, with eventual provision of the same treatment to the controls. This is easier to do if the unit of analysis is the school or classroom rather than the individual. If a whole school is in a comparison group, then all students in the school still receive the same services and attention that they always have. If the control is an individual student, it is harder to justify withholding treatment. This is especially true when the treatment may address a very serious, immediate, and potentially dangerous problem like violence.

VI: ILLUSTRATIONS OF VIOLENCE PREVENTION PROGRAMS

Sometimes teachers, administrators, parents, and others express a sense of hopelessness about the many challenges of youth violence and the role that schools play in promoting or reducing it. Historically there have been many attempts at quick fixes, an emphasis on maintaining social control rather than on improving school climate, and a dependence on approaches that have lacked any empirical data on effectiveness. Fortunately many schools have begun to shift their strategy. Part of the change results from necessity: these historical approaches have not worked very well and the problem of school violence is increasing. The need to garner additional resources has also increased as local communities struggle to support their schools and as school funding formulas are being reexamined (i.e., to establish greater equity between rich and poor districts). These resources will not come from the business community, foundations, or the Federal government without quality evaluation data for program effectiveness, even if the data are of a pilot nature and short term.

Many school-based violence prevention programs focus on individual children identified by teachers or peers as aggressive or at risk for school failure (Coie et al., 1992; Hawkins et al., 1992; Tremblay, Kurtz, Masse, Vitaro, & Phil, 1995). School violence, or the potential for it, is then reduced by decreasing individual risk of perpetrating violence at school. For example, if a program reduces a child's aggressive behavior and increases that child's problem-solving ability and social skills, the school will decrease the likelihood of the child's instigating a fight with a peer or reacting with hostility to one of the many conflicts which occur at a school (Grossman et al., 1997). Some programs combine a focus on individual and family risk by integrating their school-based programs with efforts to work with parents and families, peers, or community members (Huesmann et al., 1996; Kellam & Rebok, 1992). Still other programs integrate an individual risk focus with attempts to change the culture or environment of the school. These programs tend to place a lot of emphasis on the comportability of their strategies across people, settings, and places (Embry et al., 1996; Grossman et al., 1997). The focus on changing the environment is meant to provide positive, long-term reinforcement to sustain individual behavior change (Walker et al.,

1995). Most programs have a dual focus: increasing student social skills and prosocial competence, and reducing aggressive behavior (Kazdin, 1994).

This section presents illustrative examples of some violence prevention programs that show promise as effective strategies. Three criteria generally guided the choice of examples. First, programs at the elementary, middle, and high school levels are described because they are generally very different in their focus, content, and purpose. Second, there is a focus on programs that are relatively well-established. This is not to say that they are necessarily old, but that they have been adopted in many different locations. Even though few programs will work equally well in all settings and all geographic locations, there is also no need to reinvent wheels. Third, the sample includes programs that have undergone some level of evaluation of effectiveness. Intensive evaluation of school-based violence prevention programs is a relatively new phenomenon, for in the past more effort has been put into creating and implementing the programs than into evaluating them. By no means are these programs the only ones operating, and they are not necessarily the best models for all schools and all situations. Indeed, other resources review additional school-based violence prevention programs (U.S. Department of Justice, 1995; Powell & Hawkins, 1996; Eron et al., 1994; Hoffman, 1996; Act Against Violence, 1995; Crawford & Bodine, 1996). The programs discussed below should be viewed as specific, singular components of a comprehensive, long-term strategy to reduce school violence.

Elementary School Programs

Three elementary school-based programs are reviewed: PeaceBuilders, which originated in Tucson, Arizona; Second Step, which originated in Seattle, Washington; and the Young Ladies/Young Gentlemen Clubs, from Cleveland, Ohio.

The ***PeaceBuilders*** program is a schoolwide violence prevention program for students in grades K-5 (Embry et al., 1996; Embry & Flannery, in press). It is currently operating in nearly 400 schools in Arizona, California, Utah, and Ohio. Implemented by both staff and students, the program incorporates a strategy to

change the school climate. PeaceBuilders aims to promote prosocial behavior among children and staff, to enhance child social competence, and to reduce child aggressive behavior. Children learn five simple principles: (1) praise people, (2) avoid put-downs, (3) seek wise people as advisers and friends, (4) notice and correct the hurts they cause, and (5) right wrongs. Adults reinforce and model the behaviors at school, at home, and in public places. PeaceBuilders attempts to create a common language and culture that is easily transferable across people, settings, and time. The program provides extensive materials to teachers and parents, and incorporates community involvement and the media as resources to effect long-term systematic change.

PeaceBuilders is different from most school-based programs in that it is not curriculum based, but is meant to become a "way of life" in a school. Some of the materials utilized by PeaceBuilders include *praise notes* for student positive behaviors and *preferrals* to the principal's office for good behavior. Students identify with a Hero (themselves in comic books and activities) who resolves conflict and problem situations as a PeaceBuilder. Schools have a *wise person* lunch table where business and community leaders join PeaceBuilder-nominated students for a meal. Recently materials have been developed to utilize PeaceBuilder principles with at-risk and special needs children, as well as to address individual differences (e.g., culture and religion).

The program is currently in the middle of a 6-year longitudinal evaluation funded by the Centers for Disease Control and Prevention. The evaluation consists of both process and outcome data, including reports from students, teachers, and parents, and archival data from the schools and the local police department. Information on program implementation and utility is also being gathered, along with observations of playground behavior. The initial evaluation results from the program are very encouraging, reflecting teacher-rated increases in social competence and declines in aggressive behavior (Flannery et al., 1996; Flannery et al., 1997). Participating schools have also experienced reductions in student visits to the nurse's office for treatment of injuries compared to control schools (Krug, Brener, Dahlberg, Ryan, & Powell, in press).

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The ***Second Step*** program also targets young children in grades 1-3, although it also has modules for students through grade 8. Second Step is designed to prevent aggressive behavior by increasing prosocial behavior, reflected by competence in peer interactions and in interpersonal conflict resolution skills. Based on the "habits of thought" model that violence can be unlearned, Second Step includes activities to help students acquire empathy, impulse control, problem-solving, and anger management skills. A recent comprehensive and well-designed evaluation of the Second Step program showed that 2 weeks after the 30-lesson curriculum, students in the intervention group were rated by behavioral observers to be less physically aggressive and to engage in more neutral/positive behaviors on the playground and in the lunchroom (but not in the classroom) than students in the control group. Some of the changes persisted at 6 months post-intervention, although neither teachers nor parents rated significant behavior change (Grossman et al., 1997).

The third program is not as large or comprehensive as the other two, but illustrates an approach of early identification of at-risk youth. The ***Young Ladies/ Young Gentlemen Clubs*** (YLYG) in the Cleveland Public Schools targets youth in grades 1-6 who are identified by teachers and principals as at risk for school failure and dropping out and who engage in problem behavior in the classroom. Students attend a group session several times per week throughout the year. The group is run by an adult who also serves as a mentor to the students and as a liaison between the student's family and the school (i.e., by conducting home visits). The group focuses on developing problem-solving and social skills, as well as on character education and discipline. Students learn how to respect and care for themselves, each other, and adults. Music therapy has proven to be a valuable factor in the program's success. YLYG, developed by the Partnership for a Safer Cleveland, has been in existence since the mid-1980s and has served as a model for similar programs in other school districts throughout the country.

YLYG has undergone several (albeit limited) evaluations. In the most recent one-year longitudinal evaluation, children and teachers reported significant improvements in child social competence, and group leaders reported significant gains in child prosocial behavior accompanied by decreases in aggressive behavior.

Analyses of grade card data found statistically significant improvements in positive classroom behaviors, self-control, and general attachment to school. Parents also reported program benefits: 96 percent said YLYG helped their child perform better at school, 92 percent that the club had helped their child's behavior at home, and 97 percent felt the YLYG is an important part of their child's education (Flannery & Williams, 1997).

Middle School Programs

One of the most common approaches to violence prevention in middle schools and high schools is conflict mediation or conflict resolution programs. One of the most widely known is the ***Resolving Conflicts Creatively Program*** (RCCP) in New York City. RCCP is somewhat unique among conflict resolution programs in that it has models for implementation for children in grades K-12. In existence since 1985, RCCP is a comprehensive school-based program in conflict resolution and intercultural understanding (Aber, Brown, Chaudry, Jones, & Samples, 1996). Its curricula contain strategies to promote multicultural acceptance and global peace. Teachers are trained first, then student mediators. Both are trained to address conflict with nonviolent alternatives and negotiation skills. Mediators work in pairs during lunch periods and recess to identify and resolve disputes. Since its inception, the program has trained over 2,000 student mediators and served more than 60,000 students in over 150 schools.

Conflict resolution programs, while extremely popular and widespread, have not generally fared very well in the face of intensive evaluation (Webster, 1993). While several intensive longitudinal evaluations of RCCP are ongoing and the final verdict is yet to come, early research on conflict mediation programs has shown few long-term effects in reducing violent behavior or risk of victimization. One potential problem faced by conflict mediation programs was identified above: they tend to focus on mediating only the most serious conflicts which differentially reinforces them when they occur. This is not to say that the conflict resolution and problem-solving strategies learned by students and staff are not helpful and beneficial, but caution is the word for schools that rely solely on conflict resolution programs as their panacea for school violence and crime. RCCP shares this caution,

and promotes itself as only one component of an effective school violence prevention strategy.

Other examples of promising middle school-based programs include the ***Students for Peace Project*** (Kelder et al., 1996) and the ***Richmond Youth Against Violence Project*** (Farrell, Meyer, & Dahlberg, 1996). Students for Peace seeks to modify the school environment, promote peer leadership, and educate parents and students about violence prevention. The Richmond Project focuses on African American middle school students in an urban setting. Its 16-session program, Responding in Peaceful and Positive Ways, promotes positive and healthy alternatives to interpersonal and situational violence. Both these programs are currently undergoing intensive longitudinal evaluations. Other promising strategies include ***Positive Adolescent Choices Training*** (PACT, Hammond & Yung, 1993) and ***Peer Culture Development*** programs (Gottfredson, Gottfredson, & Cook, 1983).

High School Programs

While many high school students are exposed to conflict mediation programs, several other kinds of interventions are more prevalent with older students. These include job training, mentoring, and Rites of Passage programs. Violence prevention at the high school level also focuses more frequently on delinquent youth and those at risk for gang involvement, such as the ***Omega Boys Club*** in San Francisco, California (Act Against Violence, 1995).

Self-Enhancement, Inc., in Portland, Oregon, is a grassroots, community-service organization that provides services to at-risk middle and high school youth. The program works primarily at the individual and interpersonal level to build resilience and promote the pursuit of healthy, productive lives. Program staff works around the clock to mentor and be available to youth in time of need. The program consists of classroom activities, exposure education, and proactive education. Classroom education focuses on anger management, conflict resolution, and problem solving. Exposure education consists of field trips to community agencies. Proactive education involves students in assemblies, media productions,

and newsletters, which are created to promote nonviolence (Gabriel, Hopson, Haskins, & Powell, 1996).

Parent/Community/School Partnerships

One of the most consistent findings from school-based violence prevention programs is that parent involvement is extremely important to the success and maintenance of any intervention. Programs with a home/school focus typically include parent workshops or training sessions on such topics as monitoring, effective discipline, increasing parent involvement at school, effectively modeling a positive attachment to school, and endorsing positive values related to educational achievement (Steinberg, 1996). Partnerships also stress increased parent awareness and buy-in of school expectations and consequences for failure to complete school work or for discipline problems. The most effective school programs are the ones that have parent support, with parents backing up school limits and consequences at home. Such support also facilitates communication between school staff and parents about children who are experiencing difficulties. It is extremely important that interventions be introduced early, as soon as indicators for significant behavior problems first emerge.

VII: RECOMMENDATIONS AND IMPLICATIONS FOR POLICY

Any approach to violence prevention in the schools needs to be a multi-component and multi-context intervention (Stephens, 1995). An effective approach includes parents, children, school staff, media, police officers, local businesses, and community-based organizations. Time limited approaches are not effective in the long run. Approaches that focus on only one risk factor (e.g., self-esteem) are also less effective. Research has shown that potentially the most effective programs go beyond a concentration on individual children and attempt to meaningfully change the climate or culture of the entire school. This is not to say that individual child-focused programs are ineffective and should be discontinued; they are a valuable violence prevention tool (Tolan et al., 1995). They do not, however, address the contextual/environmental or structural characteristics of a school that contribute to the incidence of violence. Programs also typically need to last at least 2 years before they demonstrate a change in behavior that is sustainable over time (Yoshikawa, 1994). As discussed above, aggressive behavior is very stable and chronic, making it very difficult to change with short-term, curriculum limited interventions.

Adding violence prevention programs for long-term, systematic change, given other demands on schools, may be met with much resistance. In light of the many demands on them, teachers are often reluctant to embrace any activity that requires additional training, preparation time, or effort. How to address this resistance is an important issue. One strategy is to provide information about how violence prevention programs can actually reduce the time teachers spend on disciplinary problems, increasing their time for instructional activities. Another is to demonstrate how violence prevention efforts can reduce costs for vandalism or treatment of injuries related to fighting. Violence prevention programs may also increase attendance at school and decrease truancy, especially for children who stay home because they fear for their safety. If more at-risk children are actually in school, the school's ability to effect change for a child, and the chance that the violence prevention program will actually benefit the children most in need of the attention, are increased.

Any comprehensive strategy for violence prevention needs to include some macrosystem components related to the formation and implementation of policy, training, and program components. Schools should offer ongoing training to staff and volunteers in ways to handle crises. They should regularly review board of education policies with staff regarding pupil safety and protection, and pupil discipline and staff responsibilities (Walker & Gresham, 1997).

Of course, the effectiveness of any intervention depends on its usefulness in the real world versus the way it might be designed in a textbook, whether the components of the intervention are transportable to other populations in other contexts, whether the intervention fits with other services provided to children in a school, and whether the program is accepted and supported by parents and others in the community. The following are some principles and guidelines to consider when implementing a school violence prevention strategy:

(1) ***Violence is behavior that is learned and can be unlearned***. If violence is learned behavior, then it is also possible to teach children prosocial competence. Positive coping skills, competencies, and strategies can be taught to very young children so they can deal more effectively with their frustrations and anger. This makes schools both a logical and necessary setting to implement, systematically and over the long term, violence prevention strategies. Teachers should purposely focus on and reinforce a child's positive behaviors and use a simple, common language to help generalize learning across settings (Embry & Flannery, in press).

(2) ***It is crucial to start anti-violence interventions early***. One of the most consistent findings in the literature is that aggressive behavior is very stable over time and chronic (Eron & Huesmann, 1993). If a child is identified as aggressive and at risk for academic failure at an early age, chances are that the child will continue to struggle over time, and the factors contributing to adjustment problems will grow in number, intensity, and complexity. As children mature and grow older, there is a shrinking window of opportunity to intervene in an effective manner. The earlier the intervention, the greater the chances of success. The resources (measured in

time, money, and effort) expended by waiting until a child is in adolescence, compared to the cost of intervening early in a child's life, are enormous. And the pool of resources available for anti-violence interventions is rapidly shrinking.

(3) ***Interventions must be developmentally appropriate.*** A violence prevention program will be less effective and may actually exacerbate the problem if it fails to take into account the developmental appropriateness of program components to the target behaviors. Assume an extreme example: a violence prevention program for kindergartners that focuses on reducing gang involvement or firearm violence. Reduced gang involvement may be a laudable long-term goal, but impossible to demonstrate in the short term as an example of the outcome efficacy of a program for young children. A focus on knowledge and attitudes may be one aspect of the program's target goals, but funders are increasingly looking for behavior change as an indication of a program's impact. Program developers, therefore, need to know which behaviors are developmentally appropriate to target for change, and the intervention strategy should be appropriate to a child's existing competencies, cognitive abilities, social skills, and behavior.

(4) ***Effective prevention is systematic and long term.*** Prevention and intervention strategies must be systematic and long term, not time or subject limited. This is directly related to the stability and chronicity of aggressive behavior and the challenges related to changing a youth's environment. Significant change cannot be accomplished with short-term, limited, and rigid approaches. Recent reviews of delinquency prevention programs suggest that interventions need to last a minimum of 2 years before positive, sustainable behavior change is realized (Yoshikawa, 1994).

(5) ***Increasing social competence should be one program focus.*** To be effective, efforts must be aimed at increasing prosocial competence and protective factors (Kellam & Rebok, 1992; Werner, 1994), not just on reducing aggression, crime, and violence. It is easy and natural to pay attention to a child's negative behaviors. Assault, vandalism, bullying, and

theft are all behaviors that contribute to fear and insecurity. The need to prevent their occurrence in the schools is paramount to ensuring a safe environment that is conducive to learning.

There are, however, at least three difficulties with concentrating on eliminating negative behavior instead of fostering positive behavior. First, negative behaviors are very difficult to stop altogether, so some incidents will occur in most schools. Second, in most schools a relatively small portion of the students account for the a large number of the discipline problems and violent, criminal acts. Merely focusing on reducing these negative behaviors puts a lot of emphasis on a small group of youth, perhaps differentially reinforcing their negative behavior, and ignores the large majority of students who are doing well. Third, by failing to focus on improving social competence, programs will not help develop the skills necessary to sustain positive behavior change and to sustain a positive, safe environment that is more conducive to learning and socialization.

(6) ***Successful programs alter the school climate***. Programs that work over the long term have a goal of changing the school climate and culture. This is not to say that paying attention to individual children at risk for engaging in problem behaviors is ineffective. Rather, simply relying on a strategy that identifies and treats individual children should be but one component of a systematic attempt to improve school climate overall.

(7) ***Successful programs are comprehensive, intensive, and flexible.*** Programs that work are intensely sensitive to the needs of the children and families they serve and the unique circumstances that must be addressed in a specific school, for specific children and staff members, and in a specific neighborhood. Many of the basic principles identified here as components of successful programs are necessary and will be effective across contexts, time, and settings. However, in implementing any program or intervention it is crucial not to be overly rigid, as every situation is different, the timing and circumstances vary, and the sociocultural climate varies across sites, even within the same school system or city.

(8) ***Successful programs increase children's attachment to school,*** promote their involvement in school activities, and focus on academic achievement. Children who are disengaged from school have little or no investment in acting appropriately while they are there. A tremendous amount of energy goes into paying attention to children who are truant, who daily receive disciplinary referrals to the principal's office, and who are at risk of failing academically. If children are more attached to and involved in school, daily truancy rates may decrease. Children cannot learn when they are not in school. Chronic truancy in grades K-2 significantly and negatively impacts children's chances of being successful in school and increases their risk of dropping out. This in turn increases the risk for associating with a deviant peer group and engaging in delinquent behavior and violence. Parents who model and encourage school attachment and academic achievement have children who are less likely to become involved with violence (Steinberg, 1996).

(9) ***Schools must take into account the impact of victimization by violence and its effects*** on child learning, motivation, teachability, adjustment, and ability to accomplish appropriate developmental tasks. Exposure to violence or victimization by violence may occur in many forms and may affect children in many different ways. Witnessing a friend being shot or being shot at oneself may be a different form of exposure or victimization than constant harassment by a bully at school. Nevertheless, both forms of violence may result in increased distractibility, irritability, anxiousness, and anger; they are the "masked effects of violence" (Flannery, 1996). What looks like Attention Deficit Hyperactivity Disorder may really be the manifestation of post-traumatic stress brought on by chronic exposure to violence. Staying home from school with a stomach ache may be the way a child is coping with fear for personal safety at school. Constantly getting into fights with peers may be a reaction to a perceived threat from others rather than a child's deliberate engagement in predatory aggressive behavior.

(10) ***It is essential to evaluate the anti-violence program's effectiveness***. Base the program's components on what is known to be effective. Evaluation research, even if it is conducted at a very basic level, is an essential component of an effective violence prevention strategy (Webster, 1993). It is not sufficient to assert a program's effectiveness in another school, community, age group, or ethnic/culture milieu, because its benefits may not transfer. The pressure to evaluate the effectiveness of a program at a specific site in response to funders, parents, and policy makers (school boards, state legislatures) is steadily increasing.

(11) ***It is important to involve parents and other community members and organizations*** in the school's violence prevention efforts. Whatever the constellation of a family, caregivers and others at home play a critical role in modeling and teaching children appropriate social skills, coping strategies, and competencies. Home is also where the most common form of victimization, sibling assault, occurs. Parents remain influential role models for children through adolescence, and they can model both appropriate and inappropriate behavior and problem-solving strategies to children. Having parents and schools agree about discipline strategies and safety concerns, as well as involving parents directly in the provision of service at the school, is essential to a program's support structure and long-term viability.

(12) ***It is good practice to involve peers*** in a way that promotes and rewards prosocial peer interactions. Peers play an important role in sustaining a positive school climate and peer groups are important sources of influence on a young person's behavior. At-risk children can learn from their more socially competent peers.

(13) ***Issues related to school safety, discipline, and student victimization and its impact should be integrated into teacher orientation and training***. General teaching strategies known to contribute to a more prosocial school climate should also be presented. Teachers are often unprepared to address the complex school discipline

issues they encounter in the classroom. New teachers may need help in identifying behavior patterns that may be related to violence exposure or victimization.

(14) ***School staff and other adults should be hopeful,*** and model this hopefulness to children. There exists longitudinal evidence spanning many years that most children are extremely resilient and overcome a great deal of hardship and turmoil in their lives, growing up to be high-functioning, well-adjusted, and productive adults (Werner, 1994). Hopelessness is one of the most disparaging and difficult to overcome aspects of youth's reactions to the violence they encounter daily in their lives. If they do not expect to have a good life, or to live long, then their day-to-day behavior, goals, and motivation to succeed will reflect this hopelessness.

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